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LORD ROSEBERY'S ENTERPRISE AGAINST THE HOUSE OF LORDS

It would be idle to question the gravity of the pronouncement of Lord Rosebery that it is the intention of the Government to introduce, during the next parliamentary session, a resolution declaratory of a policy antagonistic to the House of Lords. At the instance of the Ministers of the Crown, Parliament is to be invited to enter upon the task of fundamentally changing that legislative system which has remained, during the past seven hundred years, organically identical.

Lord Rosebery is singularly—though evidently of set purpose—obscure as to the means by, and the principles on which, the House of Lords is to be deprived of its general equality of status as a legislative Chamber with the House of Commons. The vague declaratory resolution which he announces for next session is but the ceremonial raising of the standard of conflict between the two Houses; the subsequent appeal to the people will, if events prove favourable, result in no more than the formal sanction by them of the principle of that resolution, which, according to the Premier's statement, is in substance to be that the House of Commons, in its partnership with the House of Lords, is 'unmistakably the predominant partner.' If the electorate sanction the resolution, the Government will then proceed to a 'revision of the Constitution'; but, as to its nature and method, Lord Rosebery is silent and apparently intends to remain silent until, if it so happen, the electorate have given their assent to the resolution.

It is, however, inferred from Lord Rosebery's speech that this

promised revision of the Constitution means what he terms 'the abolition of the veto.'

It is hardly necessary to observe that the word 'veto,' as applied to the legislative functions of the House of Lords in relation to measures that have passed the Commons, is singularly inept. The House of Lords, save in the excepted matter of finance, is the legislative equal of the House of Commons, and if by the term 'veto' it is intended that the Upper House exercises a constitutional function over parliamentary Bills different from that exercised by the Commons the phrase is wholly inaccurate.

Nevertheless, what in substance Lord Rosebery evidently means by 'the abolition of the veto' is that the legislative action of that House is not to proceed further than the power of protest; in other words, the abolition of the House of Lords as a legislative Chamber.

But while all constitutional writers concur that in the theory of our Constitution—save in respect of finance—the House of Lords is the legislative equal of the House of Commons, all, none the less, give general adhesion to the view that the Upper Chamber has, with the progress of society and the development of free institutions, gradually conceded to the Lower House a predominant position. The functions of the modern House of Lords were felicitously described by the late Mr. Bonamy Price:—'To balance and regulate the political movement of the nation . . . to test by temporary resistance the sincerity and strength of the will which demands a change, to make legislation take its stand on the good sense and ultimate judgment, instead of the momentary desire, of the country, and to give continuity and stability to the general policy of the nation.' Quotations from the speeches of distinguished statesmen and the writings of constitutional authorities, abundantly demonstrate that the proper function of the House of Lords is not to initiate legislation, not to offer uncompromising resistance to the measures of the Lower House, but, in the words of Lord Stanley, spoken in 1852, 'to control, amend, and revise, the legislation of the House of Commons.' Further, history clearly proves that although the theory of our Constitution may be otherwise, there has not, since, at least, the days of the Commonwealth existed with us a Second Chamber in the sense in which we understand that institution in the polity of other nations—a Chamber claiming and exercising co-ordinate legislative powers with the popular Assembly.

The general truth of this proposition cannot be impaired by the fact that there have been many measures accepted by the Commons and subsequently rejected by the Lords; but, in every case in which that rejection has so far been final, the House of Commons has not been insistent, and wherever the House of Commons has been insistent, the rejection has not been final—in other words, the House of Lords has often held its gate against the passage of legislation, it has never, in modern times, applied bolts and bars.

De Tocqueville, commenting in his great work upon the Legislatures of the United States, points out that in those not infrequent conflicts that take place between the Senate and the House of Representatives—Chambers of absolutely co-ordinate legislative powers—the ultimate predominance of the popular Assembly is secured by the same cause that operates in England. 'There is,' he says, 'so irresistible an authority in the legitimate expression of the will of a people that the Senate could offer but a feeble opposition to a vote of the majority of the House of Representatives.' Yet, although the House of Lords has hitherto been little more than a dilatory factor in the work of legislation, there are signs and tokens that the cleavage between the two Houses must, of necessity, grow wider and deeper with each successive Parliament. Mr. Bryce, in his work on the American Commonwealth, justly traces the comparative harmony that exists between their two Chambers to the 'substantial identity of character in the Senate and the House.' 'Both equally represent the people, the whole people, and nothing but the people.' The character of the House of Commons is vastly changed. Less than thirty years ago the members of that House were, for the most part, scions of noble families or landed gentry. Now they have given place to the manufacturer, the merchant, the lawyer, and the journalist; thus, while formerly the intimate personal connections between the members of the two Houses exercised a subtle, yet well-marked, influence in maintaining cordial relations and facilitating the accommodation of difficulties, now, under changed conditions, those relations are formal and constrained, and tend rather in the direction of exasperation than of mutual concession. Further, and above all, the House of Commons is now the facile instrument of that democracy which seeks the subversion of those institutions and interests of which the House of Lords is the representative and custodian.

It is this strongly marked change in the *personnel* and motive force of the House of Commons which tends in the direction of materially altering the constitutional relations between the two Chambers. Lord Salisbury, in his recent reply to Lord Rosebery, although his language was guarded, clearly indicated that henceforth the attitude of the House of Lords would be less complaisant: 'The House of Commons,' he said, 'is becoming less and less fit for the position of solitary domination over the interests of the people of this country.' In these words may be found the key to the future situation; the House of Lords, by prolonging and intensifying their resistance to the legislation of the Commons, will eventually bring about that crisis which Lord Rosebery now seeks to precipitate.

Let it be conceded that the country responds to the appeal of Lord Rosebery and sends back a majority of members pledged to a 'revision of the Constitution.'

Although the Prime Minister speaks in halting and ambiguous

phrases, yet the most natural inference, and that generally accepted, from his language is that he means 'the abolition of the veto,' that is to say, that the legislative functions of the Upper Chamber are to be confined to an expression of opinion on, or the framing of amendments to, the measures submitted to it, and should that opinion be adverse, or should amendments be framed, the measure will return to the House of Commons, which will exercise its pleasure thereon and, according to that pleasure, the measures, with or without the suggested amendments, will, or will not, become law. This in effect is nothing more nor less than the transformation of the House of Lords into a committee for suggestions and representations—a species of Advisory Board. It is the annihilation of the House of Lords; for it is impossible to conceive that in the event of the hereditary and representative peers being on paper constituted into a consultative Assembly of this character, this Assembly would ever have any corporeal existence. At the present time the peers have a real and effective control over legislation; an authority which, whether in action or in reserve, affords dignity to the Chamber and prestige to its members.

But perhaps Lord Rosebery does not purpose the destruction of the House of Lords, but only its reconstruction or re-organisation. In that policy he may secure the co-operation of the Conservative party, but he will purchase that co-operation at the expense of the support of the preponderating section of his own party.

It would be idle to enter into a disquisition upon the various schemes that have been formulated for the construction of a Second Chamber; not the least remarkable was that which Lord Rosebery submitted to the House of Lords in 1888. His proposed Second Chamber was to consist of: (1) a delegation chosen from and by the existing peers; (2) persons elected by the County and Municipal Councils; (3) colonists of position; and (4) certain persons nominated by the Ministry as their representatives. Such was the remarkable Assembly that Lord Rosebery proposed should control the legislative activity of the House of Commons. His plan was transcended in ingenuity by that of Lord Dunraven, who proposed, in addition to 180 delegated peers from the present Order, that there should be certain life peers—10 for the Colonies, 2 for the Roman Catholics, 2 for Protestant Dissenters, 2 'for science, letters, and sound learning generally,' and 1 for each County Council. The most moderate proposal, entirely free from the fantastic attributes that characterise the schemes above mentioned, was that of Lord Salisbury—it merely provided for the removal of unworthy persons, and that there should be power in the Crown to appoint 50 life peers chosen from men of learning or distinction in the service of their country.

All the above-mentioned schemes of reconstruction, and the many others that have from time to time been formulated, have, be

it observed, one distinct object to serve, and also entail one inevitable result, namely, the strengthening of the House of Lords and the diminution of the predominance of the House of Commons. It is obvious that a Chamber resting on the popular sanction involved in the formal Act of Parliament so constituting it, composed of men selected for their learning, wisdom, or civic distinction, and, perhaps, participating in the elective element, would stand in an incomparably stronger position in relation to the House of Commons than a Chamber solitary among the Second Chambers of Europe, as exclusively—save and except the four Law Lords—representing the hereditary Baronage of fourteenth century feudalism.

If it were possible to construct a Second Chamber to act with the House of Commons on the terms of common relation to the nation, admirably expressed by Mr. Bryce in his description, already cited, of the American Houses—'both equally representing the people, the whole people, and nothing but the people'—then indeed the Constitution might gain in stability, and legislation proceed on firmer and more consistent principles; but, if that end cannot be compassed, the statesman who sets about the task of destroying the archaic survival of our early civilisation and building up a new Senate, equally unpopular in its instincts, but resting on a higher constitutional sanction, may be likened to the biblical character who swept and garnished his house only to realise results more disastrous.

It is a curious fact that the great majority of modern Legislatures consist of two Chambers, and from that fact constitutional writers have frequently drawn the inference that Second Chambers have been established, by the wisdom of mankind, for the set purpose of securing greater deliberation and consistency in their legislative and administrative policy. So far as the more ancient Legislatures of Europe are concerned, that theory will not stand the test of historical examination. The true origin of the majority of European Second Chambers may be illustrated by the history of those of France and England. In England, as is well known, the two Chambers owe their origin to the distinct principles upon which the barons and prelates and the *communitates* were taxed—they separately voted their taxes, and thus not unnaturally drifted into two Chambers, though originally the three orders, clergy, nobles and commons, collectively met. In the same way the three orders of les Etats Généraux, in 1302 gathered together in Notre-Dame; 'la noblesse tient le premier rang et les princes du sang font corps avec elle.' After the Chancellor gives out the royal message asking for advice and aids, 'les trois corps se séparèrent pour en délibérer.' It will be remembered that, after being in abeyance for 175 years, the three orders of les Etats Généraux met in 1789, and that the third estate, on the withdrawal of the two other estates, constituted itself into a single legislative Chamber. The subsequent Legislatures of 1795 and 1799

were divided into two Chambers, partly from the traditions of les Etats Généraux and partly from the example afforded by other European nationalities.

In the case of modern Legislatures there is little doubt that the example of England was not an immaterial factor in causing the institution of Second Chambers. Undoubtedly such was the case with respect to our Colonies; although in the United States it may be that the principal reason for establishing two Chambers was that the Senate represented the individual States making up the Union, and the House of Representatives the whole Union.

The advocates of a Second Chamber contend that it operates as a check upon hasty and ill-considered legislation, and prevents permanent evil consequences resulting from a merely transient phase of popular opinion. Their contention is not without weight; although, on the other hand, it would be difficult to indicate instances where the riper judgment of the nation has justified the action of the House of Lords in rejecting measures which have been passed by the Commons, or where such action has resulted in more than unprofitable delay. The vital issue of Local Government for Ireland is still *coram populo*, and no final inference can therefore be drawn therefrom. It is, moreover, certain that the individual responsibility of members of the Lower House is much weakened by the fact that their legislative decision is not final; it is of no uncommon occurrence for a member to permit his better judgment to yield to party pressure or the clamour of an importunate section of his constituents, encouraged to do so by the comforting reflection that by means of a Second Chamber, without personal hurt to himself, that better judgment will ultimately prevail.

It may, however, be granted that a Second Chamber, identical in political and social sympathies with the Lower Chamber, but free from the immediate influence of passing waves of popular excitement, might exist with advantage to the State—in a partial degree such an institution exists in Norway. Their representatives are elected to the Storthing, but the Storthing, on its election, divides itself into two Houses, the Lagthing the larger, and the Odelsthing the smaller body, and legislation has, on the same principle as in this country, to pass through both Houses, but in event of persistent disagreement the two Houses become merged, and the vote of the majority prevails, but this is not a method of restraining the power of Democracy, or of maintaining the influence of the aristocracy, it is merely a plan more effective than the standing orders of a single Chamber for securing greater deliberation in procedure.

A Second Chamber, resting on an aristocratic basis and effectively exercising co-ordinate powers with the representative body, cannot continue in a country where the representative Chamber is purely democratic. Prior to 1832 the control of the State was with the

aristocracy; from 1832 to 1885 it was with the aristocracy and the middle class, with a leaven of Democracy; since 1885 the sovereign power is the Democracy.

But if it be the abolition of the House of Lords that Lord Rosebery intends, how is that end to be compassed? Lord Rosebery indicates two possible means, namely: (*a*) a great act of renunciation of their powers in obedience to the definitely expressed will of the Commons; (*b*) revolution—by which term he appears to mean submission by the Lords, through fear of the application of force. Lord Salisbury accepts this view of the situation, but the former seems even more sceptical than the latter as to the probability of success, for he says: 'No such Bill as the abolition of the House of Lords, or the limitation of the veto of the Lords'—and he admits the two are identical—'would ever pass the House of Lords . . . unless you overawe the House of Lords. . . . Of course you may get the House of Lords to surrender as you get a fortress to surrender, by making it clear that it is encompassed and besieged beyond all hope of deliverance, but that in itself is not an easy task.' It is certainly not with high hopes of a speedy deliverance that Lord Rosebery invites the Liberal party to stake their fortunes upon this venture, but he clearly recognises and frankly declares that it is only by the revolutionary method that he can hope to succeed.

It will be well to inquire what are the conditions under which Lord Rosebery embarks on his enterprise. He tells us he counts for the success of his appeal to the country upon what he describes as 'a feeling of subdued but persistent resentment against the House of Lords.' The phrase is felicitous, but probably the situation might more accurately be described by saying that there is a general conviction on the part of the public that law-making power by way of inheritance is an irrational anachronism. Profound, however, as that conviction may be, it is not by itself adequate to submerge those multitudinous issues which constitute the battle-field of a parliamentary election. Issues, not indeed so large, but of more immediate interest, captivate the electorate, and in the name of Home Rule, Disestablishment of Churches, the Liquor Traffic *et hoc genus omne*, the electorate are sectionally appropriated by one or the other party. At intervals in our political history some issue appears transcending all others. Such occasions were the Reform elections of 1830–31; the struggle for the repeal of the Corn Laws, and, in later times, the agitation for the Disestablishment of the Irish Church; but now, in the absence of one definite and all-absorbing issue, the electorate is distracted by the confusion of tongues clamouring over the manifold items of a Newcastle programme.

It may be that, between now and the general election, the Peers may outrage the susceptibilities of the people and relegate their fate as a definite and unobscured issue to the judgment of an indignant

electorate; but the parliamentary programme of the approaching session seems to afford scant hope of that consummation. On the other hand, if Lord Rosebery is to rely—as indeed he declares—upon their misdeeds during the past session, his case is not formidable. They rejected Home Rule, but in so doing they obeyed the electorate of England, by whose adverse verdict he can alone secure their condemnation; they threw out the Evicted Tenants Bill, but that can hardly be regarded as a measure of capital importance, and at any rate it stands in *pari passu* with Home Rule; they sought to amend the Employers' Liability Bill, but therein they had the support of no insignificant section of Liberal members of the Commons, and working-class opinion was at least divided thereon. This, so far as the last session was concerned, is the 'head and front of their offending.'

If, therefore, the attack upon the House of Lords cannot be successfully founded upon the record of the present Parliament, neither can it be justified by their action during the preceding Parliament, 1886–1892; for then, during the Conservative administration, it was the complaisant ally of the Lower House. Its delinquencies must therefore be traced to a period before 1886. But what was the opinion of the most advanced section of the Radical party in the autumn of 1885? In that year appeared a series of treatises entitled 'The Radical Programme.' Its preface was written by Mr. Chamberlain, then the *enfant terrible* of the Conservative, the idol of the new Liberal. It is no exaggeration to say that this little book was the text-book from which political inspiration was drawn by Liberal and Radical candidates during the election of 1885. The book contains little concerning the House of Lords, but the following extract sufficiently indicates its attitude towards that Chamber: 'No one now menaces the Peers with disestablishment, because they have acquiesced in the national will.' If, then, the course of contemporary politics does not on its surface afford an explanation, to what cause or causes are we to trace this unexpected declaration of war by the leader of the Liberal party? The pressure of Mr. Labouchere and the resolution of the Leeds Conference may have precipitated the event, but the true reason is probably to be found in the intolerable position which the Liberal party occupies in relation to the House of Lords. The Upper House has become the ally of the Conservative, the antagonist of the Liberal party. This is not a temporary but a permanent condition; it is not so much the outcome of the Irish policy, as of the Reform Bills of 1867 and 1885, which have resulted in the identification of the Liberal party with those advanced political and social reforms which menace the interests and outrage the sentiments of the landed aristocracy. Prior to 1885, the Liberal party, though in a considerable minority, enjoyed an effective share in the deliberative and legislative activity of the Upper Chamber, now it is an insignificant fraction, and it may justly be said

that although Lord Salisbury does not possess the titular rank of Premier, for all legislative purposes he is as much the Prime Minister of England as Lord Rosebery. It is obvious that the Liberal party cannot continue to quietly submit to a situation which places their legislative achievements at the absolute and unchecked discretion of their political antagonists, and operates as a helpful factor to a Conservative Ministry by facilitating their legislative and administrative work.

It is however a grave question whether, in the interests of his party, Lord Rosebery is warranted in jeopardising their political fortunes upon so perilous an enterprise. The House of Lords cannot be destroyed by the mandate of an imperious Minister, nor at the dictation of a political party. Its destruction can only be compassed by the national will responsive to a profound sentiment of popular indignation. It was thus the House of Lords fell during the Commonwealth; it was thus the Parlement de Paris perished, and the Third Estate of les États Généraux became, in 1789, the Legislative Assembly of France. If Lord Rosebery can arouse a like national sentiment, if even he can induce those who profess the Liberal creed to lay aside the narrow and selfish interests of faction and address themselves to the realisation of the ideal of a perfected democracy, then, though the struggle may be arduous, ultimate success will attend his efforts; but if at the coming election the verdict of the country, be it through indifference to the issue raised or greater regard to other and more immediate issues, result in the rejection of Lord Rosebery's policy, while the House of Lords will gain in prestige and receive encouragement to assertion of a larger authority, on the other hand the democratic principle of government will sustain a shock of which the Liberal party will be at once the author and the victim.

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IF THE HOUSE OF COMMONS WERE ABOLISHED?

An Act to abolish the Commons House of Parliament is scarcely within the scope of practical politics, and a man who could seriously propose such a measure would probably be regarded as a lunatic. Certainly no one in his senses would voluntarily attempt so great a revolution as that of removing from the Constitution the most imposing and conspicuous portion of its machinery.

But institutions are apt to lose their real power and working efficiency long before anybody would think of taking active steps to do away with them. It is generally felt that the House of Commons has not increased in dignity and authority of late years; but it is not, perhaps, recognised that the lower chamber of Parliament now performs functions of government, legislation, and administration considerably less important and valuable than those with which it is credited, not merely in the vague theory of the Constitution, but also in the opinion of most Englishmen.

Ask any person of fair intelligence what the House of Commons is and what it does, and his answer, given without much thought of the matter, would probably be to the effect that it was the real, if not the nominal, sovereign body in the Empire; that it made our laws, chose our Ministers, and controlled the Executive in the daily conduct of affairs; that it was the supreme custodian and steward of the nation's purse; that it was the great arena for the discussion of national business, and the main instrument for the redress of all public grievances. This is the view of the House of Commons to which Englishmen have been accustomed from childhood, and they accept it mechanically. But a little close consideration of the subject would show that of all the great functions commonly attributed to the House of Commons there is scarcely one which is now performed satisfactorily by that assembly, or which is not performed quite as efficiently by some other agency. One may go further, and say that, shattering as the blow to our sense of settled order and stability would be if the House could suddenly be destroyed, its destruction would not necessarily produce absolute chaos. The

extinction of the Commons, supposing that by some miracle it could be accomplished quietly, quickly, and painlessly, without disorder, revolution, or violent perturbations, would not necessarily bring the Constitution to a standstill. With a little modification and adaptation of existing practices it would be found that matters might go on, in effect, very much as they do at present. The main difference would be that we should then recognise the real character of our system of government, as it has developed itself in comparatively recent years, instead of concentrating our attention on the cumbrous and antiquated House of Commons vesture which hides the structure and true anatomy from our eyes.

Take the chief nominal and ostensible functions of the House of Commons, and consider how far the House does actually perform them at present. The most important of these functions, according to all the text-books and theories of the Constitution, are these:

(1) Legislation.
(2) Administration and executive control.
(3) Financial policy and management.
(4) The discussion of abuses and the redress of grievances.
(5) The appointment of Ministers.
(6) The testing and selecting of public men in debate.

It is impossible to maintain that the House of Commons still retains its old and theoretical supremacy and efficiency in all these matters, or indeed in any of them. The Cabinet in the first place, the Caucus in the second, the Platform, the Press, Public Opinion, Society, and other powers and influences, have encroached on the dominion of Parliament, and more particularly on that of the Lower Chamber, in one or other province, till now there is none in which the control of the House of Commons is absolute, and scarcely one in which it has not largely abandoned the real, though not the formal, authority and effective force to other hands. Let us take the points mentioned in their order.

The House of Commons as a Legislative Body

The law-making function is, if not the oldest, at any rate the most dignified, showy, and conspicuous attribute of Parliament, and the one that strikes the popular imagination with the liveliest force. It has so far dwarfed the other powers and duties of the great national councils that we commonly talk of the two Houses, and sometimes of the Lower House alone, as the Legislature. But can anyone really affirm that the members of the House of Commons do now make the laws of these realms? To do so would exhibit either a hardy disregard of facts, or else a comprehensive ignorance of the conditions under which the public affairs of the nation are conducted. Every member of Parliament, with the exception of about six or eight who sit on the

front bench to the right of the Speaker's chair, would admit, if he spoke the truth, that he had little more real power to make laws than the writer of these lines. Like him, the M.P. has a right to criticise, to object, to suggest; but that is all. The 'legislator,' it is true, may utter his criticisms, his objections, or his suggestions in a way that appears to give them a certain air of authority, and may help to secure them some necessary degree of publicity; though even then it is much to be doubted whether a seat on the floor of the House, where it slopes away to the mountainous and unregarded solitudes below the side galleries, has any advantage over the position I am permitted to occupy in this Review; or whether the orator who addresses an attenuated House in a speech of half an hour's duration (neatly summarised in five lines of the *Times* the next morning) can be said to exercise an effective influence over the legislative projects of Ministers greater than that possessed by anybody else who has the opportunity of addressing his countrymen by writing or by word of mouth. Certainly I should be surprised to hear any thoughtful person seriously maintain that such men as the late Cardinal Manning or the present Archbishop Vaughan, or such as Mr. Herbert Spencer, Mr. Auberon Herbert, Mr. Charles Booth, Mr. Frederic Harrison, the Rev. Samuel Barnett, Professor Huxley, Mr. Stead, or Mr. Tom Mann, none of whom is or was in Parliament, would not have as much direct power to get measures accepted or rejected as most members of the House of Commons. But, indeed, what power has any member of the House to shape legislation, except the few who compose the inner ring of the Cabinet for the time being? Mr. Balfour is one of the most powerful and influential men now alive; he has behind him the enthusiastic devotion and respect of a constituency which is numbered by millions; he is accepted, with unquestioning satisfaction and sincerity, as the representative of their political opinions, by nearly one-half the inhabitants of a great country. His position, even if supported by less brilliant ability, renders him a critic of legislation whose lightest words are listened to with attention; nor do I deny that such attention is bestowed upon him by Ministers, or assert that they can afford to disregard his arguments or his proposals. Nevertheless, in the present Parliament, and until a general election has changed the position of parties, Mr. Balfour can neither legislate nor—as far as the House of Commons is concerned—prevent legislation on any subject of a controversial nature: that is to say, on any subject which is of sufficient importance to excite widespread interest. No doubt if Mr. Balfour chose to bring in some harmless or colourless measure—an amendment of the Dental Acts, let us say, or a bill to regulate the placing of street letter-boxes—he would have a good chance of carrying it into law; but even then that would only be because the Minister whose department it touched might be disposed to take a favourable view of it. Mr. Balfour's position and personal influence

would cause the suggestion to come before the Ministerial mind with greater weight than if it had been made by a writer in a newspaper; but beyond this Mr. Balfour has really not much more power to get even an administrative reform carried than any casual correspondent of the *Times*. If the department, through the Minister temporarily at the head of it, decides that the Dental Acts do not need amendment, or that street letter-boxes are suitably placed already, Mr. Balfour would know very well that he is powerless to do much more than the correspondents or editors of newspapers—that is, to protest, to educate opinion on the matter, to rouse public interest in it, to demand action upon it at some future time. Some of this work he would probably accomplish from his place in Parliament; but he could do it quite as effectually, and very probably might even find it more convenient and desirable to do it, on the platform, in the Press, and through the magazines. In Parliament he has no more real control over legislation than he has outside. If he chooses to insist upon his opinion and to divide the House against the Ministry, he will do it only to emphasise his protest; he would know quite well that he cannot prevail upon the Chamber to give effect to his views. For the moment that the leader of the Opposition announces that he proposes to divide against the Government on the Pillar-box Bill, that bill would become a party question; the Ministry would stand or fall by it; the majority would vote one way, the minority would vote the other; and as the Ministry, from the nature of the case, represents the majority and the leader of the Opposition the minority, the latter, of course, must be, and always is, beaten wherever the subject of the fight is of sufficient importance for the parties to muster their forces. So, to begin with, nearly one-half of the members at the House are not legislators at all, or only legislators on sufferance and on matters of no moment. They can neither make laws nor prevent laws being made. They can, it is true, talk about them while they are in the process of making; but so can anybody else. I do not undervalue the splendid ability and skill with which the Opposition leaders of both sections raked the Home Rule Bill with their eloquence on its passage through the House. But for all the practical effect these superb speeches had on the fortunes of the Bill in the House itself, they might as well have been delivered in St. James's Hall. The Bill was brought in to be carried by the full Gladstonian majority, and carried it was by practically that majority, as it would have been if it had been twice as long and twice as mischievous, and twice as unpopular out-of-doors. This is not to say that the arguments and rhetoric of the Conservative and Liberal Unionist champions were wasted. Quite the contrary. I believe they were of the greatest possible value in training, enlightening, and directing the public mind. But I am speaking now of their effect on the House of Commons. And here they could do nothing except settle the

convictions of Mr. T. H. Bolton, and disturb those of Dr. Wallace and Mr. William Saunders—a result which, however gratifying in itself, was hardly adequate to the expenditure of time and energy needed to secure it. Mr. Balfour and Mr. Chamberlain did not turn votes, nor would Cicero and Demosthenes under like conditions. It is of the essence of our existing parliamentary system, as it has developed in recent years, that votes are not turned. A man is elected to vote for a particular Ministry or to vote against it; to say ditto to Mr. Gladstone or ditto to Lord Salisbury. The M.P. is the delegate of his constituents, or rather of that active political section of his constituents which for convenience may be called the Caucus. 'Your representative,' said Burke to the electors of Bristol, 'owes you not his industry only, but his judgment, and he betrays instead of serving you if he sacrifices it to your opinion. I maintained your interests against your opinions, with a constancy that became me. I knew you chose me to be a pillar of the State, and not a weathercock on the top of the edifice.' But that is not at all the view of a representative's functions taken by the members of a modern Liberal Six Hundred or Conservative Association. They do not send him to Parliament to exercise his independence; they would be particularly annoyed and irritated if he did; and they scrutinise his votes with jealous care, in order that they may take him to task speedily, and with no superfluous delicacy or reserve, if he shows any dangerous tendency in that direction. And the modern M.P. understands the conditions of his political existence so well that, in point of fact, he hardly ever (for practical purposes one may say never) does vote against his party on any party issue, especially when his own side is in office. Rare indeed are the cases during the last twenty years in which a Ministry has been beaten in a party division by the defection of its own supporters. One of these, the defeat of the Gladstone Government in 1885, on Mr. Childers's Budget Bill, was partly an accident, if it was not, as many people thought, produced by the connivance of Ministers themselves, engaged in the process known as 'riding for a fall'; while the defeat of the Government, in 1886, on the first Home Rule Bill was not so much a revolt against the Ministry as the result of civil war within that body—a mutiny in the camp, with several of the generals at its head. In practice, then, we may take it that, whatever the theory of the Constitution may be, a Ministry once put into office by the vote of the electorate can count on the votes of the whole body of its supporters, for any legislative project whatsoever, until it chooses, or is compelled, to dissolve Parliament.

The Cabinet and the Caucus:[1] these are the real, efficient, working parts of the political machine. So far as law-making goes, there is

[1] I use this word with no opprobrious or contemptuous connotation, but simply as a convenient mode of designating the political associations and party organisations in the constituencies.

no room for the House of Commons between those upper and nether millstones. As for the Opposition, it has been shown that it can be eliminated; it does not count, except here and there by the contemptuous, or the courteous, acquiescence of members of the administrative oligarchy for the time being in power. Nor is the case of the member of the Ministerial side outside the Ministry itself much better. He is not in any true sense a legislator; he has in reality no power to make new laws or to prevent them being made, or to amend old ones. He is not consulted, any more than the members of the Opposition, on bills which Ministers propose to introduce; he sees them only when they come from the printers'; and then he knows that, whether he likes them or not, he will have to support them in the Lobby, or, at any rate, such parts of them as are vital, if his leaders choose to insist upon them. Lord Salisbury, in his Edinburgh speech on the 30th of October, uttered a few pregnant words on this subject:—

> There is an enormous change in the House of Commons as I recollect it, and that evolution is going on still; and we have reached this point—that discussion of a measure is possible in the Cabinet, but for any effective or useful purpose, it is rapidly becoming an impossibility in the House of Commons.

It is all very well to say that a private member can bring pressure to bear upon his chiefs by declaring that he will not vote for the Bill unless it is altered here or there. Ministers know, and he knows, and everybody knows, that he will not carry out his threat; he would no more vote against a Government measure on the second reading, or against what Mr. Gladstone has called an 'organic detail' in Committee, than a player in a football team would turn over to the other side because he disapproved of the manner in which the captain had placed his forwards. The athletes in our parliamentary ring have to play the game; and the game is that you go with your party. The member who did anything else would ruin his political career, and be considered by his constituents to have committed a moral breach of trust. Anyone who wants to understand what the British Constitution is in practice, as distinguished from what it is in the text-books, must grasp this point. Governments may be, and are, defeated in the constituencies; they are no longer—accidents and chance divisions apart—defeated in the House. Once placed in office, a Ministry can do, within reasonable limits, pretty much as it pleases, till either a fresh general election occurs by efflux of time, or till it is warned by the results of the by-elections that it will be prudent to venture a dissolution. How little real control members of the Commons, on either side, can exercise over the legislation proposed by Ministers, was strikingly, and even startlingly, illustrated in the Session of 1893, when a measure so controversial as the Home Rule Bill, one on which it is inconceivable that all the members of the majority—to say nothing of the Opposition—could have seen absolutely eye to eye, was voted

through, at the call of the Cabinet, with more than two-thirds of its clauses not so much as discussed in Committee. The rank and file of the predominant party can be content without even looking at the Acts they are asked to make into law for all time. It is enough that the Ministers are the chosen of the constituents who have sent *them* to Westminster. Their task is simple. 'Theirs not to reason why, theirs not to make reply'; but only to vote—straight. The Caucus and the Cabinet system combined have made the ideal of the member of Parliament approximate to that of the soldier, in whose code of duty the first word is Obedience.

Let us assume for a moment that, by some such silent and miraculous revolution as I have hinted at above, the House of Commons had been swept out of existence, while the other parts of our Constitution were left standing. I suggest that in all essentials the progress of events in regard to the Home Rule Bill would have been little different from what it was. The function fulfilled by the House of Commons, though it looked all-important, was in reality almost otiose. Suppose that Mr. Gladstone and his colleagues had been elected by the direct choice of the constituencies, instead of by a process of secondary election through the Houses of Parliament. Instead of sending a number of respectable, mediocre, or distinguished political items to London, to support Mr. Gladstone until he resigned or dissolved, the Home Rule majority of the three kingdoms might just as well have cast their vote at once for Mr. Gladstone and such colleagues as he desired to assist him in the government of the country. Suppose the Ministry thus chosen had 'tabled' its Home Rule Bill before the nation on the first of February, by means of the Queen's printers, and had announced that, by the last day of July, that bill, with such alterations as Ministers themselves might incline to make in it, should be sent up to the House of Lords? I ask what difference in the general result this would have produced. The bill would have been before the country for six months; it would have been discussed, criticised, turned inside out, defended by its supporters, riddled and bombarded by its opponents, in the newspapers, in the magazines, and on the platform. The fine speeches of the front Opposition bench would have had quite as much effect on the mind of the nation and on the minds of Ministers if they had been delivered at public meetings; and scores of other members who never got a chance of speaking on the measure in the House would have had leisure and opportunity to talk about it to the country. Publicists like Professor Dicey, whose criticism of the two Home Rule Bills had probably as much influence as that of most M.P.'s, would still have had their say. If there might have been rather less speaking, because the shutters were down over the 'talking-shop' at Westminster, there would have been a little more writing about the Bill; and considering that most men write with rather greater care and

thought than they speak, that would have been no disadvantage. In the space that intervened between the first and third readings of the Home Rule Bill, the measure, it is true, was altered a good deal by its authors, and in parts almost recast; but that alteration was not due to adverse votes in the House of Commons. It was the effect of searching criticism and of the conviction brought home to the minds of Ministers that some parts of their bill would not 'work.' But the criticism would have been as acute and as potent in producing its results if it had been delivered anywhere else but on the floor of the House. Once admit that all the oratory of Westminster will not turn half a dozen votes one way or the other, except on an issue for which nobody cares, and the chief theoretical function of the debates disappears. The House is not a legislating Chamber; it is a machine for discussing the legislative projects of Ministers, and as such it has no great superiority over the various other instruments by which political discussion is in these days carried on.

The House of Commons as the Controller of the Executive

What has been said of legislation applies largely to administration. The House of Commons no longer controls the Executive; on the contrary, the Executive controls the House of Commons. The theory is (see the text-books) that the Ministers must justify their several measures before the representatives of the nation; once they fail to do that, the representatives will turn them out. This is quite admirable as a theory, and up till a comparatively recent time it corresponded, more or less, to the facts; but it certainly does not do so at present. The modern practice is that the Cabinet is not turned out of office by Parliament *whatever it does*. It is quite understood now that on a vote of confidence, or on anything which it chooses to treat as a vote of confidence, the Prime Minister can always count upon practically his majority. A member, disgusted or unconvinced, may perhaps invent an excuse or a parliamentary attack of illness in order to stay away from the division; but to vote against his party would be regarded by his constituents as a serious breach of faith, and even too frequent abstention would not be tolerated. And this is so clearly recognised that nobody would now divide the House upon an act of the Executive with any hope of forcing the Ministry to resign; it is simply done to impress the country, and to call attention, in a striking manner, to the criticisms and arguments directed against the Government. Under the circumstances, the control of the House of Commons over the Executive is little greater than that of the United States Congress. It is often dwelt upon by English writers as a blot on the American system that the representatives of the constituencies have no real power to supervise the Administration. They cannot displace the President, who, therefore,

during his four years' tenure of office, can do what he pleases, subject only to the consideration that, if he does anything very unpopular or very unwise, his party is not likely to come in again at the next election. But that is very nearly the case of an English Premier, with this main difference, that his command of office and unlimited power is not a fixed term of four years, but some indefinite period (less than seven years), the limits to which will be set by himself, after consultation with the party whips and due consideration of the by-elections and the reading of the political barometer in the constituencies. You cannot tell beforehand how long Lord Salisbury or Lord Rosebery will choose to hold office when he comes in; but you may take it as practically certain that till he goes out he will be allowed to carry on the administration, subject, indeed, to unmeasured criticism in the House of Commons, but not subject to the practical and effectual check of an adverse vote in that Assembly. The real check upon a too gross and salient misuse of Ministerial power is, no doubt, the salutary fear of public opinion; but this is a restraint that would be pretty nearly as operative without the assistance of the House of Commons, which does not respond to it except after a general election. The country may change its politics in consequence of the acts or omissions of the Executive, but the rank and file of the House do not. If they do, we should find members constantly, or at any rate occasionally, voting with the Opposition; but that does not happen. (The custom of voting with the party has solidified into a rule; and that rule established, the control of Parliament disappears.) How can the Executive be controlled by a body the majority of which is certain to support it whatever it does? And if I am told that I am assuming too much, and that Parliament has not abandoned its right to censure or punish an unwise Executive, I again point to the witness of contemporary history. I ask how often has a Government been beaten by a hostile vote of the House of Commons, during the last twenty years, on any point involving administrative action of real importance, and whether in those twenty years it is not to be supposed that the Ministers of both parties have not done some things which deserved condemnation? But condemned they have not been; and how could they be condemned by their own followers, who are sent to Westminster, not as statesmen and legislators, but as delegates of a party Caucus, to support a party combination? So far, then, as administration is concerned, I say that if the House of Commons could 'softly and silently vanish away,' like the people in Lewis Carroll's poem who had seen the Boojum, its disappearance would make no essential difference in the practical conduct of our affairs. Ministers would devise the big-drum, high-sounding measures of State policy—as they do now; departmental officers would quietly carry on the humdrum, every-day details of national business—as they do now; the former would be fiercely criticised in the open,

and not reversed unless their authors themselves could be induced to believe, chiefly by the press and the platform, that they were inexpedient—which is the case at present; and the latter would be untouched, save here and there by some expert, whose best chance would still be that of convincing the official hierarchy, through its nominal chiefs in Parliament, that they were wrong on some practical details. The nation's business would probably be done no better and no worse if the House of Commons formally abrogated that theoretical control of the Executive which it has so long abandoned in practice.

The House as a Guardian of the National Finances

On this point there is no need to dwell. If what has been said above is correct, it applies to the management of finance, which is partly administration and partly legislation, and in either character, as I have endeavoured to show, is beyond the effectual control of non-Ministerial members of Parliament. The Budget, the Naval Estimates, the Civil Service Votes, are part of the general policy of the Government; as such, according to the now established principle, they are bound to be accepted by the majority. They may be altered in detail with the acquiescence of their authors; not otherwise. The province of private members in regard to them is limited to criticism, and there are special reasons why in these cases their criticism, as a rule, is particularly inefficacious. The details of these subjects are often highly technical, and the House is a miscellaneous body of amateurs, overburdened with work, and—so far as the majority of its members are concerned—extremely ignorant of the complicated questions which arise in connection with the financial and departmental measures presented to it. The consequence is that debate on these subjects is almost abandoned to the handful of experts, who are too few in numbers and too little influential with the outside public to be able to force their views on unwilling Ministers. Who is not familiar with the farce of a debate on the Army or the Navy in Committee of Supply? Millions are voted away, vital questions of Imperial importance are discussed and disposed of in the presence of a Minister and an under-secretary or two, an ex-First Lord, a couple of thoughtful hobbyists, and a dozen or so of growling colonels and grumbling admirals. The bulk of the House—busy, fatigued, bored, and idle—is out at dinner, or on the terrace, or in the smoking-room; its members will come and vote if required, but otherwise will know no more of the debate than the general public, who will glance languidly the next morning over the array of unintelligible figures and unfamiliar names. Here, again, the function of the House of Commons is no longer active. Other organs could, and in point of fact do, supply its place. Which would command the more attention:

a speech by Lord Charles Beresford, or Sir Charles Dilke, or Mr. Arnold Forster, on some military or naval topic, in Committee of the House of Commons; or a letter in large type in the *Times* by any one of these authorities? No one who follows public affairs can have any doubt as to the answer to this question. Several times in recent years it has been shown that it is far easier to compel a Government to change its naval policy as the result of a 'scare' or an agitation got up in the newspapers, than by means of votes or speeches in Parliament.

The House as a Ventilating Chamber

That Parliament is still used to call attention to abuses and to demand the redress of public grievances no one will deny. Yet even here it has been largely superseded. No doubt a question in the House of Commons is one way of giving publicity to a subject. But it is only one way. There are plenty of others, and some of them are equally effectual. The value of the question asked or the resolution moved, and its influence on the public mind, depend not so much on the fact that it is put in the House, as on the personal weight of the member who brings it forward. The time has gone by when anybody can be greatly impressed by the mere mention of a matter in Parliament. All that is secured is the certainty of a report in the newspapers. But the man of weight in affairs can 'get into the papers,' and so reach the ear of the public, by other methods if he pleases. In any case we have to come back to our two great powers—the Cabinet and the Caucus. The object of the question or the motion is to impress the Ministry directly or the electorate indirectly. No one supposes that it is possible by any action inside the House to get the Government to do anything which it is unwilling to do. And this is so far assumed that the ventilating process now more and more tends to be carried on without the assistance of Parliament at all. If you want an administrative evil remedied, or a new project accepted, you may write to the papers about it; or you may get up a public meeting and make speeches upon it; or you may instruct the member for your division to be good enough to ask a question in the House about it. But if you are really anxious to draw the maximum of attention to your subject, you will probably induce some persons of influence to go in deputation and talk to one of the Ministers about it. Thereby you serve a double object. In the first place, you may perhaps bring over to your views the temporarily omnipotent individual who can, if he chooses, give effect to them; and, if you do not succeed in that, you have at any rate brought the matter before the notice of the public in what may be called a formal and official manner. Everybody must have noticed how this practice of deputationising Ministers on all sorts of questions has increased of late

years; but perhaps everybody has not realised that the custom is a tacit recognition of the growing importance of the Cabinet and the declining weight of Parliament. Persuade the Minister, if you can; that done, you need not trouble to persuade the House of Commons.

The House of Commons as a Maker of Ministers

Admit all the arguments suggested above, and it will be said that there is one function remaining to the House of Commons which is of supreme importance. Bagehot and Hearn and other writers on the Constitution have insisted that neither law-making, nor administrative control, nor the care of the public purse, nor the redress of grievances, is the highest and most difficult task of the representative Chamber. Besides and beyond all this it is the Grand Elector, or rather the grand selector; it is its business to nominate and appoint that committee of persons who for the time being rule the Empire. Modern constitutionalists, recognising how largely the powers of Government and legislation have been absorbed by the body which we call the Cabinet, rightly attach the greatest possible weight to this function of the Commons. The House, they point out, is the great training ground and testing laboratory for public men; here they have the opportunity of showing their mettle, and displaying those qualities of mind and character which distinguish the sheep from the shepherds and the rulers from the ruled; here, by a long process of reversed gravitation, the larger intellects gradually, through years of friction and contest, rise to the surface, while the lighter and smaller men settle down in the obscurer depths; and it is by the results of this elaborate competitive examination that the House chooses its prize-winners and leaders. Powerful as the Ministers may be, they are, at least, the creatures of the people's representatives. But are they? I would suggest that even here the House has lost its ancient monopoly. No doubt, if a man is to obtain a position of dignity, influence, and emolument above his fellow-citizens, it is expected that he either be somebody or have 'done' something. The former arrangement is, on the whole, the easier, though it unhappily is not for everybody to bring about. If you are born the son of a duke, or are closely connected with a great territorial and political family, or even if you are a wealthy banker with large local influence, you may slip into the Ministry without being much of a personality in the House of Commons. If you are favoured by no such advantages, there are various ways in which you can endeavour to prove that you are worthy to be ranked among the Somebodies. You may, no doubt, get yourself elected to the House of Commons, and then you may eventually rise to the front bench by ability in debate and knowledge of public affairs. But that course is slow, and not specially to be recommended. It is far better to be a big man before you get into Parliament. In the

House itself your chances may be long in coming; for the Assembly is very much overdone with work and speeches, and as there is not nearly time for everybody to speak, it prefers to listen to those of whom it knows something. The young and obscure member, even if he have ability, may wait several sessions before he can get the opportunity to make his mark. Long before you have come through the ranks of that *difficile* and awkwardly managed Chamber, you could have made a name and a following for yourself outside; you might have become mayor of a great municipality, like Mr. Chamberlain; or a leader of political thought, like Mr. Morley; or gained a reputation at the bar and on the platform, like Mr. Asquith; or engineered a successful 'Labour' movement, and got the trade union thousands to back you up, like Mr. John Burns. How long would it have taken any one of these gentlemen to rise to their present positions of influence in the House of Commons if they had begun their careers in the House itself, unknown and unreputed?

However, one may admit freely that the Westminster Debating Society, with its perpetual clash and conflict of character and intellect, is still not a bad winnowing ground, and does do much to sift out wheat from chaff. But, however this may be, the facts will not support the proposition that it carries the process further, and actually chooses and stacks the good grain, and casts the husks into the fire. The selecting is only partially done by the House, whatever the theorists may say. No one who fairly considers the history of the Cabinets of the last ten years can contend that it is. It is somewhat invidious to mention names; but one may point the moral without offence by a few examples drawn from both sides. Take the remarkable series of transactions which were connected with the formation of the Conservative Administrations of 1885 and 1886. How can it be said that it was the House of Commons which chose Lord Salisbury to be Prime Minister, the late Lord Iddesleigh to be Foreign Secretary, or Lord Randolph Churchill to be Chancellor of the Exchequer? The selection may have been perfectly right and judicious; but the House of Commons had nothing to do with it. It was settled, as these things are settled, in a few meetings in West-end drawing-rooms, libraries, and clubs, and the House had only to accept the result. Or take an even better and more recent instance. Did the House of Commons select Lord Rosebery to be Prime Minister? Lord Rosebery's appointment shows how little the testing-ground theory amounts to in practice; for Lord Rosebery was never in the House of Commons, and his reputation has been gained outside it—in the Lords, in the *salons*, in the Foreign Office, in the County Council, in places where men take their dinner and make speeches afterwards. In favour of this statesman, undoubtedly distinguished and eminent, but of a distinction and eminence not of the House of Commons and not gained in it, there

was passed over the most able and influential politician in that Assembly on the Ministerial side, a man who had fought his way up by years of hard service on the green benches, who had acquired a commanding influence in debate, and was unquestionably popular with the rank and file of his party, whatever may have been the feelings entertained towards him by his colleagues. The supersession of Sir William Harcourt, and in a less degree that of Lord Iddesleigh, are standing proofs that the opinion of the House of Commons is not sufficient to choose our rulers for us; for it is highly probable that if the views and wishes of the House of Commons had alone to be consulted, Sir Stafford Northcote would have been Chancellor of the Exchequer, if not Premier, in 1885, and almost certain that Sir William Harcourt would have been Prime Minister in 1894. Or look at some of the minor lights in the political firmament. The House had as little to do with the choice of Mr. Asquith for Home Secretary in 1892 as the German Reichstag with the choice of Count von Caprivi to succeed Prince Bismarck. The one owed his appointment to Mr. Gladstone quite as much as the other owed his to the German Emperor. The selection, as it has turned out, has been thoroughly justified by the event, and has proved eminently creditable to the late Premier's foresight and judgment; but it is safe to say that not ten private members of the House of Commons in the summer of 1892 would have predicted that Mr. Asquith would become a Secretary of State; and not twenty, if these posts were really conferred by the vote in the Chamber, would have declared in favour of an able lawyer and clever speaker who had then done nothing to place himself conspicuously in the front rank of the parliamentary army. Again, did the House of Commons make Mr. Herbert Gardner Minister of Agriculture, or Mr. Acland Minister of Education? Did it make Lord George Hamilton First Lord of the Admiralty, or Mr. Jackson Secretary for Ireland? There is nothing to be alleged against the ability and character of any of these gentlemen, and I have no doubt they have one and all administered their departments with conscientious industry and general success. But it may be said without offence or disrespect that there is not one of them who had such a position that his selection for high Ministerial office would have seemed inevitable to the House, and not one who, if the appointment had been settled by ballot at Westminster, would have had a much better chance than some two score or so of other M.P.'s of recognised capacity and experience. The House acquiesces in the selection of Ministers; it does not itself select them.

By whom, then, are these momentous nominations made? Looking at the facts, and not at forms and fictions, one would say that the efficient influences are two: first, 'the country,' and, secondly, certain managing political cliques in London society. There are some few public men of such commanding weight and influence that

they are independent alike of the House of Commons and of the party managers. The electorate—that is, of course, their moiety of the electorate—will have them, and their claims cannot be denied. In such cases the election is practically a vote for or against one or two of them; as in 1880, when the real question was whether the electors desired Lord Beaconsfield to continue in office or not; in 1892, when the alternative practically was for or against Mr. Gladstone; or as it will be at the next general election, when everybody will be asking himself whether he wants Lord Salisbury and Mr. Balfour to come in or to stay out. In these cases 'the voice of England is the choice of England,' understanding by the voice of England the voice of Scotland, Ireland, and Wales as well. You cannot say that the House of Commons has much to do with the matter; it does not choose the successful party leader who comes in on the top of the wave, and it could not reject him if it would. Could the House have made anybody but Mr. Gladstone Premier in 1892, whether it wanted him or not? In 1880 the majority of the Liberal members probably did not want him, and would have preferred Lord Hartington; but they had to take him all the same. And if the House of Commons were abolished, the *plébiscite* could be held and the country elect its Prime Minister, with much the same essential result. Here, again, is a case where the functions of the House of Commons are a great deal larger in appearance than they are in reality.

The choosing of the Ministers of the second rank, who are not of sufficient prestige and weight to be called to office by the popular voice, is a different matter. The House of Commons is not consulted in Cabinet-making, and most of its members know nothing of the process till it is over. Then they learn, as the general public does, that such-and-such noblemen, gentlemen, and lawyers have been appointed to various greater and minor offices of State. The selection formally rests with the Crown; in reality with the Prime Minister, acting in consultation with his court or private cabinet of advisers on party affairs. An English Premier is usually either a great nobleman, or a commoner of advanced years, distinguished eminence, and close personal relations with the aristocratic, territorial, and wealthy classes. In either case his associations are constantly with the more select members of that miscellaneous, but tolerably well-defined, collection of individuals and family groups, living during a considerable portion of the year in the West-end streets and squares, who make up what is called 'Society.' These are the people of whom the Cabinet-maker knows most, the only people with whom he is likely to be in frequent contact; and consequently, when he is selecting his Ministry he looks for its members, as a rule, in these circles. But he does not usually look for them himself. He is probably too busy, or too important, or too much a *grand seigneur* to be very well posted in the personalities of the world and of politics; he

is dependent, like other kings, princes, and presidents, on his court and his chancellery. The plain fact is that, under this democratic dispensation of ours, a person has very small chance, as a rule, of attracting the notice of the great man, or of the group which surrounds the great man in club, *salon*, or country house, if he cannot find his way into the governing and managing cliques which 'work' party politics through and by society. There are various ways of getting into the inner ring. A man may be born in it—in which case, with decent abilities, there is no reason why he should not be an under-secretary at seven-and-twenty; or he may be accepted because he is very rich; or even sometimes, though rarely, because he is very clever; or because he is a person of influence in local politics, and would be likely to do good service to the party. And the chief advantage to the ambitious local politician of being elected to the House of Commons is that he has thereby a chance—at least, if he is also wealthy, sociable, and a good entertainer—of working his way into one or other of the ruling oligarchies. The House itself can do little for him directly, unless he be a person of the most exceptional ability and force of character; but indirectly, if he also possesses the necessary qualifications of wealth, manners, and hospitality, it can help him to get his footing in the right set. Once firmly established there, he is as eligible as another for nomination to office. He may talk to the party chiefs and impress them with his personal ability; and he will, at any rate, have the opportunity of becoming acquainted with the ladies and gentlemen who meet the Premier and the members of his closet-council at dinners and luncheons, who stay with them at country houses, and are married to their sisters, brothers, aunts, and cousins. Thus, when the time comes, he may find himself a junior lord or an under-secretary, or even a Minister at the head of one of the great departments; and the House of Commons, it may be with a little mild surprise, acquiesces—partly because it cannot help itself; partly because the oligarchies, with that excellent good sense and self-command which have always distinguished the English governing classes, do not, as a rule, make flagrantly bad appointments. If the subordinate members of the Cabinet and the Ministry generally are not much above the average of members of Parliament, they are not often below it.

This explanation of the mode in which Ministries are made is not exactly orthodox. Neither the popular *plébiscite* nor the influence of London society is recognised by the writers of the text-books. But these elements are at work all the same; and anyone who takes the trouble to consider the composition of some recent Ministries will find it somewhat difficult to find a more plausible explanation of the presence in them of several noblemen and gentlemen who could be named. For our present purpose it is sufficient, at least, to suggest how little the House of Commons has to do with the matter.

With some modification in the details, the present system of government and appointing governors could go on, in essentials the same, if the House of Commons were abolished.

The Ballot in the Commons: A Suggestion

If there is any force in what has been said here, it will be seen that the comparative weakness and inutility of the House of Commons is due mainly to the increased power of the Cabinet, and to the position of members of Parliament as delegates directed to vote with the party according to the orders of the Caucus, rather than as representatives able to exercise an independent judgment. Space will not permit me to go into the question of the means by which the system could be altered, even if it were desirable to alter it. A good many people would be inclined to say that it is not. They would, perhaps, hold that the growth of the Cabinet on the one hand, and the larger control of the electors over their members on the other, represent a natural and healthy development; and that if the result is that Parliament has more of the show than the reality of power, the arrangement, nevertheless, works satisfactorily enough. However this may be, there is an obvious method by which the Commons could effectually regain control of the Executive and become independent of the Caucus. It would only be necessary to add to the Rules a Standing Order prescribing that divisions in the House should be taken by ballot. It will be seen what an enormous difference the adoption of this simple expedient would make. If the votes in the House were taken by ballot, no one, of course, could know how each individual voted. Every member would be left free to exercise his own private judgment on the question before him, untroubled by the fear either of the party whip or the local wire-pullers; and though he would, no doubt, still usually vote with his leaders, he could, at any rate, safely vote against them when he thought them wrong. Under these conditions Ministers would have to convince where they now command; and the speeches in debate, instead of being an empty form, would actually be intended to persuade the audience to which they were delivered. The 'mechanical majority' would disappear; and a Government could not venture to bring in a bill which it knew very well was regarded with dislike and suspicion by a third of its supporters, if it also knew that those supporters could, if they pleased, give effect to their convictions at the ballot-box. A Minister, challenged on some point of administration, would have to defend himself in earnest and vindicate his action successfully, instead of merely calling upon the whips to muster their forces for a party division. In one word, the House of Commons would be, in fact, a Sovereign Assembly, and become, what it is not now, the real ruling element in the Constitution. But such a change is probably not one that could

now be carried into effect. The electors have shown no disposition to tolerate any arrangements which would deprive them of their power to control and supervise their parliamentary delegates; nor, perhaps, if the question were seriously put to them, would they regard with approval an innovation which, while it tended to weaken the Cabinet and almost to paralyse the Caucus, would make the Commons far stronger than either.

SIDNEY LOW.

ABOUT THAT SKELETON

OLD-FASHIONED people and children, frivolous, fairy-loving, story-craving children of fifty years and upwards—few younger ones survive—are beginning to inquire when the tyranny of the 'problem play' will be overpast. Not in scorn or anger do they ask the question: a long course of 'unflinching realism' has brought them too low for any such masterful emotions. Rather it is in the pleading tone that befits the oppressed and helpless, and with the pathetic look of the dumb animal in pain. That they have borne their burden with exemplary patience, not even their hardest taskmaster could deny. It must be quite five years since the admirers of an elderly Norwegian gentleman who is doing penance for a youth of romanticism in the hair-shirt of the realist brought over the 'problem play' to this country, and, ever since then, the English playgoer has been invited at intervals of every two or three months to consider 'the case' of some fresh conjugal couple or pair of lovers, some new brace of unmarried affinities or married antipathies, and to deduce a more or less gloomy future for them from a more or less shady past.

The happy woman—or she at least who is happy with the happiness of the nation that 'has no history'—has disappeared from the scene. The latest dramatic heroine is all 'history;' it is the most important thing about the play—that, and the hero's lack of historical information, on which a good deal sometimes turns. It has been said that everybody in real life has a skeleton in his closet; but in the stage life of the last few years no one has. The skeleton has almost always got out of the closet before the play begins; in no case, at any rate, is the curtain up many minutes before we hear the rap of his bony knuckles on the closet door. Once he is out, and, as I have said, he is out at once, or almost immediately, the whole plot of the play begins, and continues, to revolve about him. The husband and wife or the pair of lovers sit down and discuss him in all his repulsive bearings.

'What (they ask) is to be done with him?'

'Is it possible to live with him at all?'

'If yes, then on what terms?'

'Shall we lock him up in the closet again and deny him to visitors—if we cannot do so, alas! to ourselves?'

'Or shall we leave him at large, but endeavour to explain him away?'

'Or shall we simply brazen him out? Have him in to afternoon tea? Introduce him to our friends? Persuade the vicar to call upon him?'

The white bear and Mr. Shandy's relations to him were not more searchingly examined.

Sometimes (when it is the married couple who are in question) the skeleton leads to domestic complications, and becomes the cause of a three or four-act matrimonial quarrel, arising out of the question of original proprietorship and consequent responsibility for his presence at the conjugal hearth. In some cases he has come in as part of the wife's paraphernalia; in others, it is the husband who has brought the grisly anatomy over with him from his bachelor chambers with the rest of his celibate effects. And then—indeed, in either of these cases—the 'problem' becomes painfully acute, and its investigation more than ever like the ingenious Shandian method of enlarging the conceptions by allowing the mind to play freely round the auxiliary verbs.

A skeleton: very well. Had I one when I married? Might I have had one? Did I say I had one? Ought I to have said I had one?

Would that I had had one, as he has (for how can I imagine it?).

If I had told him (or her) that I had one, what would he (or she) have said? If he (or she) had told me that he (or she) had one, what should I have said?

Was the skeleton worth concealing?

Was there any sin in it?

Is a man's skeleton as compromising as a woman's? If not, why not? Ought it not to be? Shall it continue not to be? Should we not insist that it shall be?

So for a series of years—for all that period, in fact, which divides Mr. Pinero's *The Profligate* from Mr. Haddon Chambers's *John-a-Dreams*—we have gone on revolving round this same dreary subject. And whenever we have ventured to ask why, the answer has been that this is real life; that in real life everybody has a skeleton in his closet, and therefore it is the business of Unflinching Realism to 'trot him out.' If we have no taste for this sort of drama, the reason probably is—our realists point out to us with kindly contempt—that we are wanting in 'high seriousness,' and in the courage to look facts in the face. We ought to have lived (as some of us indeed have done) a generation ago in a less sincere and more artificial age.

Still we cannot on the whole complain of our treatment. The New Critic deals leniently as a rule with the Old-fashioned Playgoer and his belated buzzings. 'Poor devil!' he seems to say in the words of a famous apostrophe, 'why should I harm thee? The world is large

enough for thee and me. London abounds with theatres, melodrama is not yet dead, even the old impossible comedy is occasionally revived. Seek some of that dramatic infant's-food which alone your apparently feeble stomach is capable of digesting; leave us to our strong Norwegian meat, and get thee gone.' Wherewith the New Critic puts the Old-fashioned Playgoer figuratively out of the window with a recommendation to go and see *Money* at the Garrick Theatre.

Many of us have taken his advice; some few of those many, renewing thus an acquaintance with the comedy which began at its first production; others reviving recollections of it which date from more than thirty years ago. And the experience has undoubtedly been a curious and instructive one. There is no denying the magnitude of the change which has taken place in the manners—I will not say of society, lest I should seem to be assuming what I know will be disputed, but—of the stage. Thalia, to begin with, speaks a language of which no trace now remains. Nothing, for instance, could be less like Mr. Pinero's or Mr. Henry Arthur Jones's 'lines' than this passage:

Sir J. You see this fine house, our fine servants, our fine plate, our fine dinners? Everyone thinks Sir John Vesey a rich man.

Geo. And are you not, papa?

Sir J. Not a bit of it; all humbug, child, all humbug, upon my soul. There are two rules in life. First, men are valued not for what they are, but what they *seem* to be. Secondly, if you have merits or money of your own, you must trade on the merits and money of other people. My father got the title by services in the army and died penniless. On the strength of his services I got a pension of 400*l.* a year; on the strength of 400*l.* a year I took credit for 800*l.*; on the strength of 800*l.* a year I married your mother with 10,000*l.*; on the strength of 10,000*l.* I took credit for 40,000*l.*, and paid Dicky Gossip three guineas a week to go about everywhere calling me 'Stingy Jack.'

Geo. Ha! ha! A disagreeable nickname.

Sir J. But a valuable reputation. When a man is called stingy it is as much as calling him rich; and when a man's called rich, why, he's a man universally respected. On the strength of my respectability I wheedled a constituency, changed my politics, resigned my seat to a minister who to a man of such stake in the country could offer nothing less in return than a patent office of 2,000*l.* a year. That's the way to succeed in life. Humbug, my dear! All humbug, upon my soul!

It is quite an extinct dramatic tongue, and I frankly own that the scene from which I have quoted it does not exactly 'palpitate with actuality.' In fact, since I am in the way of making magnanimous admissions, I will go so far as to confess that there are few if any 'moments' in the play at which the spectator can imagine, even for the briefest space of time, that he is witnessing the acts and listening to the words of real living people whom he might meet any day outside the theatre, or can forget that he is merely watching Mr. Hare, Mrs. Bancroft, Mr. Forbes Robertson, Mr. Arthur Cecil, and other accomplished actors and actresses giving a delightful exhibition of their art. Admirable too as that art is, it is of a kind

which does not lend itself, in a play like *Money*, to the production and sustainment of illusion. Actors and actresses alike have all been trained in the realistic school of comedy; their leader may perhaps be regarded as the foremost representative of that school in England. Mr. Hare has furnished us with a whole gallery of stage portraits of worthy—and unworthy—old men, excellently discriminated each from each, and resembling one another only in a common and lifelike fidelity to the contemporary types from which they have been studied. They more than satisfy the condition which has just been referred to as unfulfilled in the case of Lord Lytton's play. You feel not only that you might meet any one of them any day outside the theatre, but that you have already met them, and are certain to meet them again and again in actual life. A histrionic method which produces effects like these, under the actor's habitual employment of it, is evidently far from being the best suited to the rendering of a part like Sir John Vesey, or to the evolution of the intrigue in which he plays so prominent a part. It tended to emphasise the unreality of the comedy, and made one feel it to be hardly a paradox to say that the play would have seemed more natural if the actor had been less so.

In short, to an educated audience of our own day, this comic 'masterpiece' of little more than fifty years ago, as it would then and for long after and without a suspicion of irony have been called, appears removed from him not by mere generations but by centuries. Its fable and characterisation have all the *naïveté* of the Jacobean masque—nay, almost of the older morality-play itself. 'Enter Cupidity with an open wallet' might be the stage direction for the coming on of 'Stingy Jack.' Graves is simply labelled Melancholy, and Mirth incarnate proclaims itself—at any rate when Mrs. Bancroft plays the part—in Lady Franklin's rippling laughter and looks out of her merry eyes. The 'Dance of Mirth and Melancholy' in the third act would be quite in the old allegorical taste. On the whole there is no denying that you come away from a representation of *Money* at the Garrick Theatre with much the same feelings as would have accompanied you home (you imagine) from a performance of some new and choice fantasy of Ben Jonson's at the Middle Temple Hall with the poetry left out.

And of course this gives occasion to the enemy to blaspheme. The New Critic is naturally ready with his gibe, and there is a world of malice in the tone in which he asks the Old-fashioned Playgoer how he has enjoyed his evening's entertainment. It will hardly do to reply that you feel as much refreshed as a contemporary of Ben's in the circumstances above supposed. 'Because, you know, you did not *go* to see a masque,' would be your critic's retort; and you would have to confess that that was in fact the case; that unquestionably you did go to see, not a masque or a morality-play, but a comedy of manners. Whereupon, of course pursuing his advantage, he proceeds

to rally you on the crudity of your tastes. Is it possible, he asks, that you can accept that so-called picture of early Victorian manners for a truthful one? Times have changed, no doubt, since the early 'forties, but the language and demeanour of private life, the 'ways' of good society, could never have been really as the author of *Money* represents them. Was there ever a time when the relations, near and distant, of a dead man met after the funeral to hear the family lawyer read a comic will, or when the disappointed expectants among them received their disappointment with loud utterances of indecent disgust, to be themselves received with almost equally indecent jeers? Were money-hunting baronets, anxious to marry their daughters to rich men, in the habit of 'giving themselves away' in the meantime with the appalling cynicism of Sir John Vesey's conversation with Georgina? Was Graves a possible figure in an early Victorian drawing-room, and did the walls of that apartment ever listen to the lingo of Alfred Evelyn?

To all which questions you are of course bound to reply that, to the best of your knowledge and belief, these things never could have been so. But you go on of course to add that they were never supposed to have been so, even among the dramatist's contemporaries. The comedy ought not to be criticised as a realistic picture of bygone manners, but as an example of an obsolete stage convention—of an extinct species of theatrical make-believe. Sir Edward Lytton Bulwer's audiences no more imagined that baronets, their daughters, their friends, and their private secretaries were in the least likely to talk and act in real life as they are made to do in this comedy, than Meyerbeer's audiences imagined it probable that a Huguenot cavalier and a Catholic countess would declare their love for each other in a passionate duet, more than half an hour long, while the massacre of St. Bartholomew was, to the knowledge of the parties, imminent. But the theatrical audience were no more shocked at the one improbability than the operatic audience were, or, for that matter, to this day are by the other. All that has happened is that one convention has perished while the other has survived. The make-believe of the opera house has remained substantially, at any rate, unchanged during the last fifty years; the make-believe of the playhouse has within the same period been totally transformed.

But when we have got thus far, we 'let in' the New Critic in triumph with what he considers his winning card. 'Transformed do you say, my venerable friend? Exactly. That is just your benighted mistake. If you had watched the progress of English dramatic art with any other eye than that of the fogy, you would never have used that word. It is a question not of transformation but of abolition. Know, old man, that it is the glory of the modern dramatic Realist to have practically done away with stage convention altogether—to have reduced the demands of make-believe upon audi-

ences to so absolute a minimum as to be virtually unfelt.' And then perhaps, condescending to our ignorance, he will go on to explain to us how few and how easy to concede are the postulates which the realistic drama finds sufficient for its work. As for instance:—

I. Let it be granted that the auditorium of a theatre constitutes 'the fourth wall' of the room represented in the scene, and that the audience are unobserved hearers and spectators of what is said and done therein.

II. Let it be granted that the personages represented may occasionally think aloud, and that some of their observations, though obviously audible to the other characters on the stage, may be treated as though unheard by them.

With these and a few other demands as modest (and let it be observed that less and less use is being made every year of the 'soliloquy' and 'aside,' to which the second demand has reference) the contemporary dramatist is satisfied. Upon the basis of such simple postulates he can build you up the most intricate and agonising 'problem play' that any wearied brain in quest of a couple of hours' refreshment can desire. Further or otherwise than as above set forth, there is absolutely no make-believe. Everything (says the New Critic) happens exactly as it does in real life. The people of the stage talk the same language, express the same ideas and emotions, act in the same way upon the same motives, as the people of the stalls. So says the New Critic, and without any make-believe on his own part. He does actually and seriously believe it!

And apparently it is because he believes it that he is not careful to answer the charge of forcing that skeleton too persistently upon our notice. What matters whether we like it or not? We must all recognise it as, *Hibernicè loqui*, true to life. The ugly secret or the uglier revelation on which he is so fond of founding his plots is the concealment or disclosure of a fact which everybody knows to be within the experience of the life we live to-day. Impossible crimes, incredible misfortunes, improbable incidents, sensational adventures have been resigned to still lingering but plainly moribund melodrama, and serious Realism confines itself to the evolution of those catastrophes which, if somewhat ignoble and unheroic—and it is of these qualities in them that the romantic old fogy is understood to complain—are at any rate catastrophes of actual occurrence in the world around us.

What is more, our realist goes on to contend, their truth to reality is beginning to be recognised by the great body of the playgoing public. Let the fogy lament, as he may, the dramatic 'fairy tales' of the past; they are gone beyond recall. A new generation, which will never again tolerate them, has sprung up—a generation more serious, more sincere in their dramatic tastes than their forefathers—a generation enamoured of truth, athirst for actuality, craving for

the representation of things as they are, eager to 'see life steadily and see it whole.'

Undoubtedly it is an impressive if not a very lively picture of the modern playgoing public; but does it correspond with the facts? Is the so-called realistic drama which this public is said to have accepted with such universal enthusiasm so unreservedly dedicated to the service of the literal truth as our realists would have us believe? Or has the dramatist of to-day, like his forerunner of half a century ago, created an ideal world of his own, and merely exchanged one set of stage conventions for another? That is a question which neither he nor his admirers, so far as I am aware, have ever condescended to consider, but which I would venture to submit to them as one well worthy of their consideration.

That the language of contemporary comedy is far more closely modelled upon the drawing-room conversation of real life may readily be conceded. But drama is the Greek for 'action,' not for 'dialogue;' and it avails little that the people of the stage should talk like the people of the drawing-room if the action that goes on on one side of the footlights differs in important particulars from what takes place on the other. Should the New Critic, scandalised at the bare suggestion, ask indignantly whether the action of the realistic drama does so differ, the answer is that it not only does but must; that, if it did not, even the most solemnly priggish of playgoers who ever went to a theatre for the purpose of 'improving himself' would be able to stand the entertainment. You can write a masterpiece of fiction if, according to the old jest, 'you have the mind' wherein, without straying a hair's breadth from the dreariest regions of reality, you shall enchain the interest of the reader from the first page of your narrative to the last. But you cannot perform that feat in a stage play and keep your audience awake to the end of it. A so-called comedy, the plot of which should evolve itself by precisely the same processes to precisely the same results as could be safely predicted from similar data in real life, would seem a marvel of ineffectiveness and inanity; and when our masters of the new drama are also, as they are usually, skilled playwrights, no one knows this better than they. There is simply no such thing as the Unflinching Realism of which the New Critic is wont to speak with bated breath. Modern dramatic realism does not, indeed, flinch from the ugly and the painful; but it flinches very violently—and small blame to it—from the commonplace. That it avoids, and is compelled to avoid at all costs and on all occasions; and obviously, therefore, to the extent of its coercion by this necessity, it deviates from that literality of truth to which it professes unwavering allegiance, and it sets up a new convention, a new make-believe of its own.

It is in witnessing the abundant proofs of this fact, which an evening at the theatre never fails to furnish, that we Old-fashioned

Playgoers have our mild revenge on the New Critic. Our own hour of malicious triumph comes as we watch the New Critic and the earnest young pessimist in the stalls, assisting at the production of a new 'comedy' with an intensely tragic *dénouement*, and as in imagination we write the New Critic's next morning's or next week's dramatic criticism for him, full of praises of the high seriousness' of the dramatist's work, and its absolute fidelity to the facts of life, of its 'sincere' this, and its 'unflinching' that, and its 'relentless' t'other. There is often more genuine comedy in such reflections and forecasts than in what is going forward on the stage. Because, of course, at nearly every critical point of the action, and certainly at every point at which the dramatist has recognised the necessity of being 'dramatic,' the earnest young pessimist in the stalls is really looking on in high seriousness at a fairy tale. Not, of course, at a fairy tale of the old-fashioned kind with a happy ending, but none the less a fairy tale for that. The godmother may have taken to bestowing malignant gifts; the awakened Beauty may resent the kiss of the prince, because he has 'a past;' Cinderella herself may have developed into a New Woman; but it is a fairy tale, if a tale of bad fairies, that the sincere, the unflinching, the relentless realist tells us—whenever, at least, he is a competent playwright—all the same. 'People don't do such things,' exclaims one of Ibsen's young women, incredulous of the reported suicide which has brought one of his dreary stories of parochial pessimism to a welcome end. The dramatist wrote the line, no doubt, with satirical intent, and by way of reflection on the limitations of the average conventional mind. But the lady was quite right. People don't. Except on the stage or—what amounts to much the same thing—when they want to get into the newspapers, people don't destroy themselves for Ibsenian motives to self-destruction. *Hedda Gabler* is Norwegian *féerie*—an intensely squalid variety of *féerie* no doubt, but undeniably possessing a grim interest of its own. It is just because, and precisely to the extent to which this Romanticist *défroqué* idealises upon the hideous banality of his pictures of the Scandinavian bourgeoisie, that he is tolerable. When he is really realist and confines himself to the actual truth about the class in word and act—why, then it is not the characters in the drama who find their thoughts wandering in the direction of suicide.

The 'Case of Neurotic Hedda,' if I may take the liberty of giving the play a more informing title than its author invented for it, affords an illustration of the New Critic's delusion, which is perhaps preferable to any English example. Because, if one could convince that earnest young pessimist in the stalls that the very Ibsen himself is not the impossible realist he supposes him, but has his own stage convention and theatrical make-believe, it would be unnecessary to press the point further. But if an English instance is required, let me take that unflinchingest of all pieces of unflinching

realism, *The Second Mrs. Tanqueray*—a play of the greatest interest and power, admirable alike in construction, characterisation, and dialogue, and the immense success of which has about it only this element of the regrettable, that it threatens us with a long line of Mrs. Tanquerays stretching out—not, one would fain hope, to the crack of doom, but, as one cannot but fear, to the n^{th} term of a series of married Magdalens, personally conducted across the stage by hands less skilful than those of Mr. Pinero. Yet what is the truth about this indisputably fine and moving play? Paula Tanqueray, let it be granted, is, so far as concerns her character and much of her action, reality itself. But Aubrey Tanqueray, marrying her as he does, and from the particular high-flying and altruistic motives by which he is actuated, surely borders closely on the fairy prince; and as to the *dénouement*—the powerful and justly praised *dénouement*—I make bold to say that, from the first appearance upon the scene of the inconvenient young man who has 'come back into Paula's life,' the play itself becomes unadulterated fairy tale. Its tragic end is brought about by both husband and wife—two out of the three characters on whose combined action everything turns—behaving precisely as people so situated would *not* behave in the real world, and rejecting the counsels of the third, the inconvenient young man, who vainly endeavours to persuade them to behave as people in that world *would* behave. And what has here been said of *The Second Mrs. Tanqueray* applies equally, but more forcibly of course where there is less than Mr. Pinero's *ars celandi artem*, to the whole series of skeleton pieces which it has suggested. In each and all of them realism only prevails to the extent of creating the skeleton and letting him out of the closet. As soon as it comes to disposing of him realism at once gives way to idealism, with a marked preference for disagreeable ideals. The skeleton of the stage is allowed or encouraged to execute a dance of death among the *dramatis personæ*, dealing destruction with every caper of his fleshless limbs. The skeleton of real life is invariably locked up in the closet again with all possible despatch.

Let me not for a moment be understood to complain of the stage treatment of him. If he must be introduced, let us by all means get what interest and excitement we can out of him, even if it be of a tragic or melodramatic kind. Far be it from me to treat it as a matter of reproach to the unflinching realist that he flinches from reality where reality would be uninteresting. He does well to flinch from it; he would not, to my thinking, be an artist if he did not. It would be highly uninteresting to lock up the skeleton in the closet again with all possible despatch, as we do in real life; and his realistic inventor does well, therefore, to turn idealist in the last act, and to make him execute his dance of death among the *dramatis personæ*. He does well, I hold, to adopt what is in the

strictest etymological sense of the term a 'convention' of his own, or, in other words, to assume a tacit understanding between himself and his audience, whereby they agree to make believe that a certain unreal line of conduct on the part of his characters is real.

But if and in so far as he does this, he 'gives away' the New Critic, and covers the earnest young pessimist in the stalls with confusion as with a garment. For the dramatic realist at once descends from the position in which these two mistaken admirers have placed him; he ceases to be a prophet of the absolute truth of things, charged with a discouraging message to mankind, and with no choice but, however reluctantly, to deliver it; and he becomes a story-teller, like another. Instead of being dynamically inspired to state certain disagreeable facts about life and little else, because in his prophetic soul and conscience he believes that there is little else to state, he is shown to have been simply making our flesh creep in response to no loftier impulse than that which operated on the Fat Boy in *Pickwick*. But if this is so—if in causing the skeleton to execute the dance of death instead of locking him up again in the closet, he is acting in obedience, not to an inexorable law of truth, but to a mere principle of artistic selection, then how can he evade the awkward question—Is it so imperatively necessary to introduce a skeleton at all?

And is it? Have we not had about enough of him, and may not he and his 'practicable' closet be stowed away, for a time at any rate, in the 'property room'? Would it not conduce to the general health and happiness if he were granted a well-earned leave of absence, and we could read of him in the theatrical newspapers as 'resting'? That the great body of the playgoing public insist upon his presence I do not believe. A certain limited section of that public may possibly crave for him; that body of devout devil-worshippers who sit prayerfully through a performance of *Ghosts* might conceivably miss him. But if we may trust the evidence supplied by the most signal theatrical success of the past season and the experience of the most popular of contemporary playwrights, it is to a very different sort of appeal that the 'great heart' of the playgoing public most enthusiastically responds. Mr. Henry Arthur Jones is a serious dramatist if ever there was one, and no one would accuse him of taking too frivolous a view of the scope and mission of his art. Yet though, in choice and treatment of subject, in plot, in characterisation, in construction, he is realist enough to satisfy anybody, it is by his frank and daring idealism that he wins and holds his audiences. And although I learnt with respectful amusement from the reviews of the New Critic that he and his earnest young disciple in the stalls regard *The Masqueraders* as a work of 'unflinching realism,' there were old fogies sitting behind them who

thought, and still think, that what took the audience by storm in Mr. Jones's clever and interesting play was that delightfully audacious excursion into melodramatic fairyland wherein the hero and the villain cut the cards against each other, 'best out of three,' with the heroine for the prize.

H. D. TRAILL.

CRIMINAL AND PRISON REFORM

To 'begin at the beginning' of the subject of criminal and prison reformation, the length of the sentences inflicted upon prisoners comes up for first consideration. There has been some improvement in recent years (except in political cases of treason-felony) in the matter of shortening terms of imprisonment. Much praise is due to Mr. Recorder Hopwood, M.P., for his courageous example in this respect. It may be that in some instances there has been a tendency to make a breach of the law appear a trivial matter by the infliction of a mere nominal penalty, but law tempered with enlightened mercy is certain to earn more respect from the casual criminal classes in the end than law garbed in vindictiveness and enforced by sentences of vengeful length. To give a man twenty-four hours for a drunken assault or other street row may be erring on the side of leniency, but to inflict the savage punishment of five years' penal servitude upon a criminal for stealing a few pounds' worth of property is a far greater outrage of justice. Seven years for attempting to rob a safe compared with three months for battering in a woman's face is only an illustration of how more precious property is in the eye of the law than 'the human form divine.' I am convinced that if the judges of the land could form an accurate conception of all that has to be endured in a sentence of penal servitude, there would be an end to the truly monstrous sentences of ten, fifteen, and twenty years for offences against property. There is scarcely a crime known to our age of civilisation, short of that of murder, which ought not to be expiated in a sentence of seven years of this scientific system of refined torture. Incorrigible criminality demands special consideration, though even with re-convicted criminals it is a question whether long sentences are the best remedy. It is certain that deterrence has not been finally secured beyond the length of sentence by means of prolonged detention. Special treatment rather than long imprisonment is what the grave evil of recidivism requires. The indeterminate sentence would afford the best possible incentive to reformatory conduct in all prisoners not hopelessly criminal. Under the existing system good conduct offers little, if any, test of the influences for moral reform which punitive justice exercises upon criminal character. The

'model' prisoner is, as a rule, the 'old lag,' the experienced thief and rogue, who knows the rules better than the governor; who can quote Scripture with the chaplain; who has no repugnances of feeling, religious, moral, or personal—who, in a word, would no more commit a breach of the rules knowingly than he would throw away his dinner. This is the gentleman who manages by exemplary behaviour to save himself from tasks of labour requiring much physical exertion by imposing upon the prison doctor, and who succeeds ultimately in getting a berth in the bakehouse or kitchen, or similar 'billet,' reserved for well-conducted convicts. For hopeless cases of this kind there ought to be a severe, but not a vindictive, sentence; with no remission for observance of rules, with no berths or billets in any stage of the sentence, but an increased gratuity on discharge for steady performance of some useful work-task in labour association with men of his class.

The indeterminate sentence, with release on parole on the recommendation of governor, chaplain, and prison doctor for first timers in penal servitude, coupled with the forfeiture of privileges if again re-convicted, would be calculated to encourage greater reformation than the present plan of remission by marks followed by ticket of leave. But I fear such a proposed change in the treatment of criminals is not likely to find much support with the prison authorities of our time. The day will come, however, when a more humane and more enlightened spirit will discover that imprisonment based upon industrialism, and tempered with a human sympathy that shall be guided by a deeper knowledge of comparative criminality, will be made more effective for reformatory ends than the dehumanising system which at present obtains. Meantime shorter sentences all worked out; with rational classification; with freedom to speak when at work and at Sunday exercise; with the privilege of a pipe of tobacco or some equivalent relaxation on Sunday for all whose conduct was deserving of this 'luxury' on attaining third class; better food in late stages of the sentence, and a few pounds more gratuity on discharge—these are changes which, if carried out, would remove from the existing heartless, speechless, unnatural plan of sterile treatment the reproach of cruelty and failure.

The ticket of leave is, in most instances, only a means to compel the unfortunate ex-prisoner to give facilities to the police to throw obstacles in the way of obtaining honest employment. These obstacles may not be intentionally created by the police. In some cases the reporting of the ex-convict may enable those whose duty it is to keep an eye upon his movements to prevent a hopeless thief from palming himself off for purposes of theft upon some unsuspecting employer. In a very large number of cases, however, it means that men who have been in a convict prison only once, and who may have found their way there owing to untoward circumstances, intemperance, or

temptation, and not through calculated crime, are prevented by this police surveillance from obtaining fair play in their endeavour to throw off all trace and suspicion of their past crime and prison experience. Where the 'ticket' penalty saves one employer from the risk of harbouring an old gaol-bird in the guise of an honest worker, it prevents twenty men who may be honestly bent upon better ways from obtaining the employment which would make them independent of criminal practices.

The substitution of short sentences for long terms on the marks and 'ticket' system would likewise be more economical. The average cost of a convict's detention is about 30*l.* a year. Surveillance over ticket-of-leave men costs the State more money. Reducing sentences and abolishing the need for this extra police duty would represent a considerable saving in the administration of prisons, even after providing for the extra gratuities on discharge and the better food and few small luxuries which are recommended as a strong and far more humane inducement to reform during imprisonment than the plan of unnatural silence, semi-starvation, and animal-like submission which is the essence of Sir Edmund Du Cane's plan of reclaiming erring men from crime.

The classification of prisoners in convict prisons is regulated more for mere routine reasons than for reformatory ends. The custom has prevailed of locating men in accordance with the time they have served, or the religious creed which they may profess, rather than for any other intelligible purpose; and so the custom continues to obtain. For instance, an incorrigible pickpocket, a young offender (having one or two county gaol records against him), a country labourer sentenced for some crime for the first time perhaps, a man-beast convicted for some unnatural offence, a clerk who has committed forgery through the evil influences of horse-betting or stock-gambling, and a noted cracksman of a burglar may all be tried and sentenced together, and, if the examining doctor, during probation, so decides, may all go from separate confinement together to a public works prison. Assuming, still, that these six convicts are able-bodied, they may not alone be located together in the same part of their new quarters, but they may also work together at whatever daily occupation it may please the prison authority to put them to. This is the kind of classification which obtained during my nine years' experience of Sir Edmund Du Cane's penal system. It may not be in vogue any longer. Possibly a change in a rational and reformatory direction has been made since I left Portland prison in 1882. I hope so. There is no common-sense reason why there should not be a classification according to the general character of the crimes committed and the number of convictions recorded. Young could easily be located apart from old offenders; first from second and third timers; confirmed, hopeless recidivists be kept away from all of whom some

chance or hope of amendment might reasonably be entertained, while a similar rule should govern the detention of those prisoners whose crimes will not bear description. A classification of this kind ought to make for, rather than tell against, the interests of prison discipline. Rival criminal 'ambitions,' the conflict of ingrained criminality with inexperience in crime, the boasting of old hands over the little 'fame' achieved by 'gouks' (country simpletons), and various other antagonising influences are at work, under promiscuous classification, to provoke breaches of the rules every day. The better arrangement for reformatory purposes would also tend to serve the ends of disciplinary regulations; and if the only argument against such a change is that it would disturb the routine plans which have been adhered to under existing rules, it is a ridiculously weak and insufficient objection to a proposed change which appeals for approval to both experience and common sense.

The method by which the evils of association among prisoners have been sought to be remedied under the present system is nothing short of barbarous. Perhaps I ought not imply a censure by comparison upon uncivilised peoples by the term 'barbarous.' 'Inhuman' will more accurately describe the practice of prohibiting speech among prisoners throughout their entire sentence, long or short. By what authority Sir Edmund Du Cane has been empowered to add this unnatural punishment to that which the law has inflicted I know not. Possibly there is some wide latitude allowed to the central prison authority in the measuring out of punishment to criminals under its charge, and that it was under this discretionary power this plan of needless torture was added by this head official to all the other pains and penalties of imprisonment. Be that as it may, there is no earthly justification for this extra suffering and humiliation, unless it be found in a desire to add the element of vindictiveness to the long category of prison hardships embraced in a sentence of penal servitude.

The penalising of speech begets seventy or eighty per cent. of prison offences, but produces absolutely nothing of a counterbalancing reformatory or moral effect which could not be better obtained by more humane and rational regulations. No prisoner is so depraved by crime as to feel that there is any the least moral or legal warrant for depriving him of the right to say 'good morning' to a fellow unfortunate. Liberty, he will admit, he has lost through his crime; the right to inflict the ordinary degradation of convict life upon him he will concede, with a protest against length of sentence or harshness of treatment; but not all the reasoning in the world can obtain from him the admission that the judge who sentenced him to ten years' imprisonment meant to include in that terrible penalty the deprivation of the right to speak to his companions in misfortune during the whole of that period. Nor will all the terrors of bread and water and punishment cells stop him from trying to exercise this natural right.

Here, then, we have a fruitful source of prison disorder germinated by a rule as fruitless of good as it is inhuman in nature and purpose. Nay, it can be truly said that this infliction of the dumb torture must inevitably keep alive all the propensities to trickery, deception, and subterfuge which are the most prominent features of criminal character. These cunning faculties are kept in hourly exercise throughout long and short sentences by the very rule which was instituted with the object of keeping them in check! Surely this is, to say the least, 'how not to do' the work of moral reform in the prison treatment of the criminal classes. To argue, as the apologists of this cruel rule do, that it only adds to the other penalties of an imprisonment which is society's retaliatory measure for crime, and that it tends to deter those who have to undergo this experience from repeating their offences, is to make a far stronger case for the reinstitution of the rack and the 'alderman's daughter' than for our less brutal, but by far more refined, system of mental torture.

To what extent a real reformation of criminals can be hoped for from the legal chastisement of penal servitude is a wide question. We could only arrive at a more or less accurate conclusion on this point if the social, industrial, and educational condition of the classes from which criminals are recruited had remained what they were, say, when a sheep-stealer was hanged for appropriating forty or fifty shillings' worth of mutton, or when a woman was burned in Newgate so late as a hundred years or so ago for passing counterfeit coin. Severity of punishment did not erect a successful barrier against crime in those times, nor does it do so now, nor will it ever do so. There is but one kind of criminal in these countries who is prevented from committing the most heinous of all crimes by the fear of the particular penalty attached to murder, and that is the 'bouncing bruiser,' a compound of Bill Sykes and a prowling thief, who would kill the policeman who arrests him, or the unfortunate woman upon whom he lives, if it were not for the fear of being hanged. This type of civilised savage seldom or never commits murder. It rarely happens that other habitual criminals do either. But they will not be deterred by sentences long or short, few or many, from indulging in their criminal propensities wherever or whenever they see a chance of so doing; and it is the kind of treatment which this class of irreclaimable thief merit when they land themselves within the penal realm in which Sir Edmund Du Cane holds absolute sway that is made to determine the extra punishments, deprivations, and disciplinary regulations that are meted out to every other class of prisoner. Instead of putting these and kindred perverted creatures in a prison by themselves, or in a separate wing of a prison, apart from those less inoculated with criminality, they are scattered among all kinds of convicts, who are thus made to suffer the added penalties which the central prison authorities deem it necessary to inflict upon the very worst type of criminal.

Separate cellular sleeping accommodation is about the only part

of the existing system with which there is an all-round agreement among upholders and critics of imprisonment as it is now carried on. It is charged against the London county gaols that the number of prisoners therein incarcerated frequently overtops the number of cells in such prisons. This, if true, is a grave evil, as the practice of placing two or more prisoners in the same sleeping cell is reprehensible in every way. The objection to association at night ought not, however, to obtain in the matter of daily labour. Given always a suitable classification of prisoners, according to crime and the number of convictions, and the question of convicts working out their daily labour tasks in company, under proper supervision, ought not to be subject for objection on the ground of possible contamination. The objection to association in work-tasks is carrying the idea of isolation to ridiculous and to inhuman lengths. To shut men up in pen-like cells, where they are doomed to sleep, and eat, and work, with one or two hours' open-air exercise only each day, is simply reducing them to the level of untamed beasts. As a system of mere punishment, apart from all other considerations, it leaves nothing to be desired. It tramples upon every instinct and inclination of human nature, and penalises every faculty by which man is distinguished from a tiger or a dog. To speak, sing, whistle, or walk; to attempt to ornament the cell; to offer to, or take from, a neighbour an ounce of bread; to exchange a book; to possess a needle or a pin; to stitch a button upon a garment without permission; to look out of the cell-window into the prison-yard; to protest against bad or light-weight food; to refuse to strip naked whenever the warder requires this to be done for the purpose of searching the prisoner—all this, with a hundred other nameless, irritating, ceaseless, mind-killing worries and degradations, is what separate cellular life and work means to a prisoner undergoing 'reformation' by the Du Cane plan. How, in the name of all that is rational, can men be reclaimed by means which are directly meant to deaden every one of the common, not to speak of the higher, qualities of man? As a method of punishment I grant it goes far. How much further it could be made to go in the way of making sentences more savage and vindictive it would be difficult to say. But, if imprisonment is intended to reform as well as to punish, the advocates of this system of complete isolation are unconsciously upholding a plan which deters by incarceration only, but which buys this strictly limited deterrence at the price of re-conviction and insanity to the extent testified to in each year's report of our prison administration.

The one remedy which will combine the essential ends of reform and punishment is Industrialism—work, not of the abasing, but of the useful, kind; productive labour, instead of treadmills, 'wind-sawing,' and oakum-picking. Mere mechanical 'work,' such as 'walking' a treadmill, turning a crank, or separating strands of tar-rope,

gives no occupation to the mind, engages no moral or mental faculty that will help the prisoner to take his thoughts away from present surroundings or evil reminiscences. It is the animal-like brooding of men of limited intellect, incapable of enjoying any of the higher pleasures of the imagination, which stereotypes habits of animalism and criminal disposition, and makes the twenty minutes' morning religious discourse and the chaplain's casual visit to the convict cell as ineffective in promoting true moral reformation in the prisoner as to attempt to sweeten the water of the Thames by dropping a basketful of lime over London Bridge once a day. If, on the other hand, a prisoner's daily task were to consist of some rational occupation—engaged at or learning some remunerative work; doing something of some value to himself or to the State; 'something attempted, something done' every twenty-four hours, in the way of producing articles of value, or making some ornament or toy—there would be a far different soil for the labours of chaplain and schoolmaster to work upon, and far greater moral results to show at the end of a sentence of imprisonment.

One of the favourite objections against allowing remunerative employment to prisoners is that the Trade Unions have frequently protested against it. I think such opposition arises more from mere prejudice than from any substantial ground for a grievance. The amount of trade that could be diverted from outside industry by a few thousand convicts and casual prisoners in county gaols—assuming that all these would be employed in regular trade occupations—would be very trifling. Probably not 20 per cent. of such prisoners would actually compete with, say, shoemakers, tailors, or mat-makers in their respective crafts, while the influence of Parliament could easily be invoked at any time by Trade-Unionist M.P.'s to prevent anything like unfair competition between the produce of prison labour and that of Trade-Union industry. In places like Dartmoor most of the prison labour can be devoted to land reclamation; while Portland and one or two other convict depôts have industries peculiar to the place, which in no way interfere with the interests of liberty labour. The objection would tell more against county than against convict prisons, but even among the larger casual population of the latter there could be no real rivalry that could justify this narrow-minded opposition.

We are all only too familiar with articles marked 'Made in Germany,' Austria, or other Continental countries. The demand for these is increasing rather than diminishing. Almost all the children's toys sold in Dublin are made, I am told, in villages along the Rhine. Doubtless it is the same with respect to a large percentage of similar goods in demand throughout Great Britain. These are articles which could be easily made in British and Irish prisons by prisoners who are now engaged in turning treadmills, cranks, and similar useless, demoralis-

ing 'work.' There could not well be much objection on the part of Trade Unionist bodies to the giving of such useful labour to prisons as would offer only a minimum of competitive opposition to those workers who are fortunate enough not to know what an amount of mental suffering is involved in months of silent, detestable 'labour' punishment. Anyhow a short-sighted, prejudiced opposition, having little, if any, substantial ground to go upon, ought not to be permitted to place obstacles in the way of substituting rational work for the methods now employed of making work in prison hateful to those who are expected to resort to industry instead of crime when once again restored to the outside world. A too selfish policy is frequently an unwise one, and it does not look creditable to Trade Unionism to show hostility to such humane regulations of imprisonment as those in question at a time when all parties, persons, and papers are expected to join in obtaining justice and considerate treatment for all who toil and spin in the freedom of organised industry.

No amount of comparison between the present and the old, or pre-Howard, system of prison punishment can justify such inflictions as years of speechless existence, crank-winding, treadmills, and kindred methods of making life a burden, and labour detestable in forms which deprive industry of all reformative efficacy. The system of punishment by 'labour' which produces nothing is, of course, more in vogue in county than in convict prisons, and more related to short than to long sentences. Still, this is no rational ground for its adoption as a part of what is meant to be a reformatory treatment of criminals. Anything which makes labour hateful can never become an effective means of reforming men belonging to the working classes. It is the violation of one, if not the first, of nature's laws. Labour we know to be corrective of many moral, and of not a few physical, ills. Productive labour teaches, as well, lessons of self-dependence, which would surely be of use in the task of curing young offenders of the moral evils which non-industrial lives have begotten. But it seems good to the prison authorities to ignore all this, or most of it, in their treatment of offenders, young and old, by making manual labour a chief instrument of the most degrading form of punishment—'sawing the wind,' as it is not inappropriately called in prison slang.

This ignorance—or shall I say defiance?—of the teaching of natural laws in the treatment of prisoners is only equalled by the, to me, unintelligible blindness with which the most notorious dispositions of habitual criminals are ignored by the prison authorities in repeating the one unchangeable method of treatment in these cases. An old gaol-bird's punishment grows less severe in proportion to the number of sentences which he undergoes. This is, unconsciously, a humane arrangement, paradoxical as it appears. He gets accustomed to the

nature of the thing. He 'knows the ropes,' as the saying is, and fares much better on this account on his third or fourth sentence than does the first-timer, who has to face and endure, to him, a completely reversed rule of human existence. There is nothing in the meaning of the term penal servitude which the irreclaimable thief dreads so much as real manual labour, requiring average physical exertion. A spade or a barrow, a pick-axe or a cart-collar, has the same effect upon the habitual criminal's mind, nerves, and imagination as a similar means of earning a living in the outside world would have upon the pride or caste of an aristocrat. He will malinger in order to escape 'hard graft.' He will swallow pieces of ground-glass, so as to spit blood; put bits of copper wire in his flesh, to provoke dangerous inflammation; sham madness, and resort to scores of other devices in order to save himself from the dreaded infliction of a barrow or a spade. Crank-tasks he does not mind half as much as rational labour, and yet it is to indulge this perverted creature's ingrained objection to 'blooming work' that punishment by irrational, useless, demoralising treadmills and wind-sawing has been developed to such 'perfection' under the Du Cane dispensation.

The recidivist is also the pet of the nine months' separate silent cell practice in the probationary period of penal servitude. He is the one man in prison who cares least about it. There is no 'hard graft' associated with this part of the sentence. Oakum-picking is an art in which he is a past master. He gets through his regulation daily quantity in one-fourth the time occupied by the less experienced first offender. Comparative idleness is the ideal life of the old-timer, and the trivial or useless tasks of the separate cell, which represent the most unbearable form of punishment to the prisoner who has done some kind of work for a living outside, are the merest pastime to the re-sentenced thief. Yet it is in the expectation of reclaiming this type of criminal by the ministrations of prison chaplains, in probationary separate cells, that dooms every other erring or unfortunate mortal who enters the portals of penal servitude to undergo that part of its penalty which induces most of the insanity and other mental maladies among prisoners—a dehumanising rule, which condemns a man to pass twenty-three out of twenty-four hours of the day during a period of nine months to the silence of a whitewashed cell, measuring seven or eight feet by twelve.

This part of penal servitude should either be totally abolished, or so altered that the period passed in preparatory prisons should be divided between the commencement and the termination of the sentence. To send the habitual criminal away to a public works prison immediately after sentence (provided he has to perform real labour when he gets there) would be inflicting upon him, in his own estimation, the maximum amount of punishment and suffering that an unpropitious fate could possible afflict him with. In marked contrast to the

old gaol-bird's indifference to cellular and fruitless labour is the first-timer's and young convict's suffering during this part of the sentence. The smallness of the cell, the absolute silence imposed, the penalties attaching to all movements of the body, except those required to pick oakum or coir, the horrible mockery of the noises of liberty beyond the prison boundary, the eye torture of the four whitewashed walls, with their tomb-like atmosphere and embrace, the watchings and worrying of the warder, make up a daily endurance of mental and bodily suffering which no language can adequately describe. The champions of this mode of punishment have to admit that the larger number of the cases of insanity which occur during imprisonment are referable to 'the early part of the sentences.' In other words, separate cellular punishment induces madness, while there is no contra account of reformatory results to be shown for this pet part of the present system of penal servitude. 'It prevents contamination through intercourse.' So would the amputation of the tongue or the infliction of the death sentence, only more so. Contamination can be prevented by rational classification. Separate the old from the young criminals, the professional thief from the offender who has given way to the suggestions of intemperate habits, the temptations of poverty, or the solicitation of ostentatiously displayed wealth, and every reformatory advantage claimed for cellular punishment can be reaped without the evils engendered through the mental and bodily sufferings of solitude.

It is urged, in defence of this probationary nine months' close confinement, that it 'prepares' the prisoner for his subsequent punishment in penal servitude, breaks his spirit, makes him docile and more manageable. I doubt whether it produces a single one (except, to some extent, the first) of these results, any more than it works the boasted moral wonders which it was expected to beget through the facilities it is supposed to offer for the religious and other ministering cares that are believed to be lavished upon convicts passing through this probation. This nine months of separate cell punishment makes men more irritable, injures health, and encourages mental disease. The religious teaching and schooling operations carried on during this period are more of a mockery than a reality. A visit once a month from a chaplain, once a week from a schoolmaster, and occasionally by a Scripture-reader, together with an hour's tuition each week for illiterate convicts, comprise (with twenty minutes of a religious service for all prisoners every morning) the whole of the spiritual and moral labours bestowed upon prisoners during probation. It is only just and fair to remark, in this connection, that Catholic chaplains, though paid very much lower salaries than those of the Church of England, give more time and attention to prisoners under their ministrations, to which fact is due the circumstance that there are numerous 'conversions,' such as they are,

from the Protestant to the Catholic faith on the part of certain classes of convicts.

A system of separate cell punishment, which would give the prisoner trade or useful employment with leave to ornament his cell, that would break the monotony of his solitude with visits every day from those who would really interest themselves in his reformation—visitors, for instance, like the Redemptorist Fathers, who have daily access to the cells of many continental prisons, or by select officers of the Salvation Army; visitors who would teach him some useful occupation, and give him daily proof of a kindly human interest in his moral reclamation and after-welfare—such a system could not fail in producing good results. But a treatment of this kind would be the very reverse of the present cruel and callous method of 'preparing' the newly sentenced prisoner for the after-experience of penal servitude, and there is little, if any, hope of its finding approval with existing prison authority. Useful labour should be substituted for this useless waste of human energy after a month or two of preparatory punishment in separate confinement. If work will not reclaim all that is reclaimable in young offenders and casual criminals, no amount of unnatural punishment will. Work is the punishment which the hardened offender dreads most. It is the punishment which will be healthiest for the morals, mind, and body of those who are not hopelessly impregnated with criminal disposition. Work is more humane than the torture of comparative idleness in solitude, and more in keeping with the ends which an enlightened law should seek to serve through the infliction of its penalties for offences against society.

The existing prison system is altogether too centralised. Possibly the one to which Sir Edmund Du Cane's régime is the successor may have erred in the opposite extreme. Local control, however, possessed features of flexibility and adaptiveness to which the system under discussion is an absolute stranger. There was independent inspection, more discretionary power rested with governors, far more humane regulations and treatment of prisoners obtained, while there was more local initiative and more of the civil element on prison staffs than in the case of the costly and elaborate substitute over which one official in London now presides. It is true, Sir Edmund Du Cane claims that the number of convicted criminals has decreased since centralised control superseded the régime of local administration. But is this diminution due to the efficacy of centralisation as a successful reformative and deterrent system, or to such external agencies as the spread of education, the increase in opportunities of employment among the poorer working classes, together with the operations of reformatory and industrial schools? It is unquestionably to these latter educational, social, and moral agencies that the credit of decreasing criminality belongs. Influences working for good beyond the bounds of prison walls have lessened crime; but what effect has

the new system of treating the inmates on the other side of these walls had upon the reformation of the criminal classes? This is, I think, the fair way to test the success or failure of the Du Cane methods, and not by claiming for them the credit which belongs to the general progress of society towards a higher social and moral standard of citizenship in the individual. The question to which a straight answer is required is, whether the prevailing system has materially reduced the percentage of re-convictions, and upon the reply which unbiassed facts and figures give to this question will, in the main, depend the verdict which the Commission now sitting will give for or against the demands for reform.

The growth or decline of recidivism is the standard by which a fair judgment can be come to in this matter, and in this respect the evidence against the present rule of prisons and treatment of prisoners is very strong. In the declining years of the old plan of local management the percentage of re-committals was under thirty-five, while during the past ten years of the present centralised system it has been near fifty, per cent. If this indictment can be sustained in the evidence which will be given before the Commission, there will be in this one fact alone an unanswerable argument for a change which will make for a reform back towards the old or more forward, towards a more effective, system than either. When, however, the imperfect plan of identifying criminals has to be considered, the figure of fifty per cent. becomes manifestly an under-statement of the case against the Du Cane methods. It is now acknowledged all round that the Bertillon plan of identification would, if in operation, make it practically impossible for old offenders to escape from judge and jury as first-timers, as has happened frequently in the past. It is no exaggeration, therefore, to assert that the percentage of re-commitals has increased to at least thirty per cent. since the whole care of prisoners and control of the prisons of the country were made over to a practically irresponsible single official in London. 'Shorter sentences' may be blamed by upholders of this centralised rule for part of the increase of re-convictions, but the case against the system which includes sentences that are in reality outrageously long as part of its media in the work of deterrence will be found to be much stronger when the present inquiry brings forth the evidence on both sides.

One of the grounds on which a demand for reform is based is the too military character of the present prison administration. It is claimed that the faults and comparative failure of the existing centralised régime is due to military directors, military inspectors, military deputy-governors, and military warders, who have got hold of the entire corpus of this branch of civil administration. What particular qualification men trained in arms have for the unwarlike work of reforming criminals it is not easy to conjecture. These

military men have many excellent qualities, no doubt; but these qualities would not suffice to make them, without training or experience, safe medical advisers, say, for people in need of a doctor's skill and special knowledge. Why should they be deemed to be the best class of men to be found in society for the work of curing moral maladies? Personal qualifications, which include education and character, are not monopolised by colonels, captains, and lieutenants. They are indispensable qualities, of course, for prison directors and governors, but they are to be found in civilians also, and they stand the chance of being associated there with such training, experience, and disposition as would render a non-military head of a prison a better administrator and a more broad-minded ruler of the criminals under his charge than a man of military ideas and training. Anyhow, the prison service forms so important a part of the general government of these countries that some special training for tasks so onerous, delicate, and responsible ought to be a part of any reform which the present Commission may recommend. Such a change has, I believe, been introduced in the prison administration of one or two continental countries. A demand for special fitness in prison officers of all grades will necessarily beget the best qualifications in men who will be induced to join such a service; and why there should not be such a trained qualification demanded for the highly responsible duties appertaining to the management of prisons and prisoners is simply incomprehensible.

Another change which would be sure to meet with public approval is that of independent inspection. At present the inspectors of prisons are appointed and paid by the head of the system. They are, of course, practically all soldiers. How can it be expected that men who look to Sir Edmund Du Cane as their chief will criticise, disparage, or condemn the working of his administration? In fact, the head of the system is virtually his own inspector; and were he ever so able and experienced a public servant, the power to sit in judgment upon himself in the management of the prisons of the country is carrying the principle of centralisation to lengths as ridiculous as they are unwise.

The changes which, in my judgment, would make for more reformation among criminals and for the better management of prisons are:

In the treatment of juvenile offenders there ought to be some approximation between industrial and criminal law. Boys under fourteen should not be sent to prison. It is reflection and meditation, along with punitive justice, which will tend to deter from crime. It is absurd to suppose that a boy of fourteen has his moral or intellectual faculties so developed as to profit by the penal lesson of a prison.

Imprisonment, even between the ages of fourteen and eighteen, ought to be made as rare as possible. The reformatory school is the

right place for the juvenile criminal, and the limit of age could with advantage be extended from eighteen to twenty-one in the matter of retention within these institutions.

Shorter sentences, all worked out, for first and second convictions, with opportunities allowed for earning, at useful labour, a larger gratuity on discharge, and some small luxuries, such as better food and a pipe of tobacco on Sunday (allowed to first and second-timers only), on reaching third class. More visits from relatives and more privilege for writing home to be also permitted as rewards for labour proficiency.

Third and fourth convictions for fresh crimes to be considered as evidence of ingrained criminality requiring special treatment and classification. Remission, however, to be recommended by the governor if, in his judgment, the general record and disposition of the prisoner offer any hope that he may not return again to crime on discharge. The ticket-of-leave to be reserved for this class of criminal only.

All prisoners to be employed at useful and remunerative work and trained in habits of industry. More useful books to be allowed and 'more schoolmaster' provided, with, say, Sunday evening lectures to prisoners on reaching first class, and within a year of discharge, on industrial, reformatory, sanitary, or kindred subjects, by chaplain, schoolmaster, doctor, or others approved of by governors.

Classification of prisoners to be according to character of crime and known degree of criminality. Youthful prisoners to be located apart from old offenders, and first-timers to be dissociated from re-convicted men.

Separate cell sleeping accommodation for all prisoners; but work in association to be allowed, subject to the classification specified, and to proper supervision.

The probationary period of nine months in separate cells after sentence of penal servitude to be abolished for all re-convicted prisoners, who should be sent at once to public works prisons, and put to such manual labour as the doctor shall certify will not be injurious to health. For first offenders, it should be reduced to one or two months at the beginning and at the end of the sentence.

In the matter of prison offences, the rule against speaking should be either completely abolished, or should allow the privilege of conversation at work or at exercise to be one that can be earned or lost by the standard of general character and conduct. The barbarous prohibition of all speech now leads, as I have already said, to numerous breaches of discipline and to a multiplication of punishments. The limitation of this penalty of enforced silence, or its total abolition, would be sure to make for a diminution of prison offences.

Punishment by semi-darkened penal cells for breaches of prison

discipline should be abolished for young prisoners and a deprivation of privileges substituted.

In the management of prisons there ought to be much more of the civil than the military element engaged. A special training should be instituted for this branch of the Civil Service, and among the qualifications that should be insisted upon is a practical knowledge of industrial and trade avocations. No warder should be employed who could not undergo an examination in practical industry of some kind or character. The hours of duty for a warder should be reduced to eight per day, while night duty ought to command extra remuneration.

The status of the prison schoolmaster should be raised, his services should be more generally employed than at present, and better salaries should be made to invite the best men to engage in what ought to be, and which could be made to be, one of the best reformatory influences operating within a prison.

More initiative should be allowed to governors and more responsibility be thrown upon them in the general work of treating prisoners and managing prisons. Cases put back for a director ought, except when the offence is very serious, to be disposed of by the governor, who knows (or ought to know) far more about the character, circumstances or provocation, of the breach of rules than an official from London. In serious cases of assault or attempts to escape, a prisoner ought to have the option of requiring the presence of a justice of the peace along with the visiting director when the offence is to be adjudicated upon.

Finally, there ought to be a thoroughly independent system of inspection of all prisons, local or convict; and all judges, magistrates, and members of Parliament should be allowed free access to such places at all times, and to have the right to forward direct to the Home Secretary such reports, comments, or complaints as they might deem fit and proper to make with regard to the treatment of criminals or the management of such prisons.

MICHAEL DAVITT.

WHY I AM NOT AN AGNOSTIC

WHEN I was lately asked to take part in a Symposium in the *Agnostic Annual* on the question 'Why live a Moral Life?' I felt it an honour to join a company of thinkers and writers so eminent, each in his own subject, as the supporters of that Journal. But I felt bound at the same time to declare that I had really no right to claim the title of Agnostic. If, as we have been told, Agnosticism implied no more than a negation of Gnosticism, and if by Gnosticism were meant the teaching of such philosophers as Cerinthus or Valentinus or Marcion, I believe I might say that I do not hold their opinions, that I am certainly not a Gnostic, although I strongly sympathise with what was meant originally by Gnosis, as distinc from Pistis.

But this merely negative definition of Agnosticism would hardly be satisfactory to the leading Agnostics of our time. For though Agnosticism excluded Alexandrian Gnosticism, it might include ever so many views of the universe, opposed to each other on many points, though agreeing in a common renunciation of Gnosticism.

Agnosticism, however, as now understood, seems to mean something very different. It has been explained to mean 'that a man shall not say he knows or believes that which he has no scientific grounds for professing to know or believe.' Perhaps this, too, is an article which few men would object to sign, though it leaves the door open to a good deal of controversy as to what is meant by 'scientific grounds.' Some astronomers held that the earth formed the centre of the world, others denied it; both, as they thought, on scientific grounds. The opponents of Galileo produced what they considered scientific grounds for their opinions; Galileo produced scientific grounds for his own conviction, and no one would wish that the two parties should have confined themselves to mere Agnosticism, to a profession of ignorance of the true position of the earth or the sun in our planetary system—should have shrugged their shoulders and said, 'Who knows?'

We enter into a new atmosphere of thought if, as Agnostics, we are asked 'to confess that we know nothing of what may be beyond phenomena.' But this, too, if properly interpreted, is an article which few who can see through the meaning of words would decline

to accept, while people accustomed to philosophical terminology might possibly consider such a statement as almost tautological. What may be, or even what is, beyond phenomena is the same as what we call transcendent; that is, what transcends or lies beyond the horizon of our knowledge, and therefore leaves us ignorant or Agnostics. Phenomenal means what appears to be, in distinction from what is, and if knowledge were restricted to what is, then what only appears to be could not possibly claim to produce real knowledge.

But if all these propositions are so self-evident as to make controversy almost impossible, it may seem strange that Agnosticism, not only the name, but the thing itself, should of late have been represented as the peculiar property of the nineteenth century. The whole history of philosophy forms but one continuous commentary on the fact that there are things which we can, and others which we cannot, know; nay, it is the chief object of all critical philosophy to draw a sharp line between the two. If we begin the history of systematic philosophy with Socrates, as represented to us by his disciples, we know that Socrates, though declared the wisest of men by the Oracle of Delphi, declared that he knew one thing only, and that was that he knew nothing. This has been thought by some to be a mere expression of excessive humility on the part of Socrates, just as when, in the *Hippias Minor*, p. 372, he says, 'My deficiency is proved to me by the fact that when I meet one of you who are famous for wisdom, and to whose wisdom [all the Hellenes are witnesses, I am found out to know nothing.' But there was really a much deeper meaning in his confession of ignorance, for he claimed this knowledge of his ignorance as a proof of his wisdom. He can only have meant, therefore, that he knew all human knowledge to be concerned with phenomena only, and that he knew nothing of what may be beyond phenomena. If this was the beginning of all philosophy, the end of all philosophy was to find out how we know even this; how we know that we are ignorant, and why we must be ignorant, of everything beyond what is phenomenal.

That question had to wait for its final answer till Kant wrote his *Kritik der reinen Vernunft*, and gave a scientific demonstration of the inherent limits of human knowledge. In the meantime the confession of our ignorance, the true philosophical Agnosticism, had found utterance again and again from the lips of all the most eminent philosophers. They did not call it Agnosticism, because that word, as seeming to exclude Gnosticism only, would have conveyed a too narrow and therefore a false idea. Greek philosophers called it with a technical name, *Agnoia*,[1] or, if they wished to express the proper attitude of the mind towards transcendental questions, they called it *Epoche*, *i.e.* suspense of judgment. During the middle ages exactly the same idea which now goes by the name of Agnosticism was well

[1] M. M., *Natural Religion*, p. 225

known as *Docta Ignorantia*, *i.e.* the ignorance founded on the knowledge of our ignorance or of our impotence to grasp anything beyond what is phenomenal.

In both these senses, therefore, *i.e.* in the sense of not being a follower of the Alexandrian Gnostics, and in that of admitting that all the objects of our knowledge are *ipso facto* phenomenal, I should not hesitate to call myself an Agnostic. And yet I cannot do so for two reasons: (1) because I strongly sympathise with the objects which in the beginning Alexandrian Gnosticism and Neoplatonism had in view, and (2) because I hold that the human mind in its highest functions is not confined to a knowledge of phenomena only.

To begin with the second point, I need hardly say that the very name phenomenal or apparent implies that there is something that appears, something of which we can therefore predicate that it appears, something that seems to be, that is relative to us, and so far, but so far only, known to us. That which appears is, before it appears, unknown to us, but it becomes known to us in the only way in which it can be known, that is by its appearance, by its phenomenal manifestation, by its becoming an object of human knowledge. It is known to us as that without which the phenomenal would be impossible, nay, unthinkable. That without which the phenomenal would be unthinkable is sometimes called the noumenal, the real, the absolute, and if we call its absence unthinkable, we imply that there are certain forms of our thought from which our phenomenal knowledge cannot escape, the well-known Kantian forms of intuition and understanding. These, as Kant has shown, cannot be the mere result of phenomenal experience because they possess a character of necessity which no phenomenal experience can ever claim. To take a very simple case. It is well known that we never see more than one side of the moon. Yet such are the powers both of our sensuous intuition (*Anschauungsformen*) and of the categories of our understanding, that we know with perfect certainty, a certainty such as no experience, if repeated a thousand times, could ever give us, that there must be another side which on this earth we shall never see, but which to our consciousness is as real as the side which we do see. These forms of sensuous intuition admit of no exception. The rule that every material body must have more than one side is absolute. In the same way, if we think at all, we must submit to the law of causality, a category of our understanding, without which even the simplest phenomenal knowledge would be impossible. We never see a horse, we are only aware of certain states of our own consciousness, produced through our senses; but that these affections presuppose a cause, or, as we call it, an object outside us, is due to that law of causality within us which we must obey, whether we like it or not.

If, then, we have to recognise in every single object of our phenomenal knowledge a something or a power which manifests itself in it, and

which we know, and can only know, through its phenomenal manifestation, we have also to acknowledge a power that manifests itself in the whole universe. We may call that power unknown or inscrutable, but we may also call it the best known, because all our knowledge is derived from a scrutiny of its phenomenal manifestations. That it is, we know; what it is by itself, that is, out of relation to us or unknown by us, of course we cannot know, as little as we can eat our cake and have it; but we do know that without it the manifest or phenomenal universe would be impossible.

This is the first step which carries us beyond the limits of Agnoia, and by which I am afraid I should forfeit at once the right of calling myself an Agnostic. But another and even more fatal step is to follow, which, I fear, will deprive me altogether of any claim to that title. I cannot help discovering in the universe an all-pervading causality or a reason for everything; for, even when in my phenomenal ignorance I do not yet know a reason for this or that, I am forced to admit that there exists some such reason; I feel bound to admit it, because to a mind like ours nothing can exist without a sufficient reason. But how do I know that? Here is the point where I cease to be an Agnostic. I do not know it from experience, and yet I know it with a certainty greater than any which experience could give. This also is not a new discovery. The first step towards it was made at a very early time by the Greek philosophers when they turned from the observation of outward nature to higher spheres of thought, and recognised in nature the working of a mind or Νοῦς, which pervades the universe. Anaxagoras, who was the first to postulate such a Νοῦς in nature, ascribed to it not much more than the first impulsè to the interaction of his Homoiomeries. But even his Νοῦς was soon perceived to be more than a mere *Primum mobile*; more than the κινοῦν ἀκινητόν. We ourselves, after thousands of years of physical and metaphysical research, can say no more than that there is Νοῦς, that there is mind and reason in nature. *Sa Majesté le Hasard* has long been dethroned in all scientific studies, and neither Natural Selection, nor Struggle for Life, nor the influence of environment or any other *aliases* of it, will account for the *Logos*, the thought, which with its thousand eyes looks at us through the transparent curtain of nature and calls for thoughtful recognition from the *Logos* within us. If any philosopher can persuade himself that the true and well-ordered *genera* of nature are the result of mechanical causes, whatever name he may give them, he moves in a world altogether different from my own. He belongs to a period of thought antecedent to Anaxagoras. To Plato these genera were ideas; to the Peripatetics they were words or *Logoi*; to both they were manifestations of thought. Unless these thoughts had existed previous to their manifestation or individualisation in the phenomenal world, the human mind could never have discovered them there and named them. We ought not to say any

longer in the language of the childhood of our race, 'In the beginning God created Heaven and Earth.' As Christians we have to say in the language of St. John and his Platonic and Gnostic predecessors, 'In the beginning there was the *Logos*.' If we call that *Logos* the Son, and if we speak of a Father whom no one knows but the Son, the so-called *Deus ante intellectum*, we are using human language, but if we know that all human language is metaphorical we shall never attempt to force these words into a narrow literal meaning. To do so is to create mythology, and with it all its concomitant dangers. What lies behind the curtain of these words is, in fact, the legitimate realm of Agnoia or Agnosticism. But all that lies on this side of the curtain is our domain, the domain of language and afterwards of science, which in the chaos of phenomena has discovered, and with every new generation of Aristotles, Bacons, and Darwins is bent on discovering more and more, a hidden Kosmos, or the reflex of that *Logos*, without which Nature would be illogical, irrational, chaotic, and existing by accident only, not by the will of a rational Power. Call that Power the Father, or call it a Person, and you neither gain nor lose anything, for these words also are metaphorical only, and what constitutes the personal element in man or any other living being is as unknown to us as what constitutes the personal element in the author, the thinker, the speaker, or creator of the *logoi*. All I maintain is, that if we ever speak of a *Logos* and of *logoi*, and understand clearly what we mean by these words, we can no longer say that in the beginning there was protoplasm, and that the whole world was evolved from it by purely mechanical or external agencies. If we have once recognised in all the genera or generations of the natural world, not simply the unknown, or a substance and power that is inscrutable, but the thoughts and will of a mind, that mind, so far from being inscrutable, undergoes a constant scrutiny in its endless manifestations at the hand of human science. It is in fact the one subject of all our knowledge, from the first attempts at roughly grouping and naming it to the latest efforts of scientific research, intended to classify, to comprehend and understand it. The whole of our knowledge of nature becomes thus a recognition of the *logoi* of nature by the *Logos* of ourselves. Each genus becomes a *logos*, an eternal thought or an eternal word; nay, it seems to follow from this that there is in nature no room for anything but genera; no room for species or εἴδη in the proper sense of these terms. Here we see how the Science of Language becomes the Science of Thought. If it is unity of origin that constitutes a genus, true science knows indeed of individuals which represent a genus, but not of species, though for practical purposes the human mind may give that name to varieties in their more or less inheritable and permanent form; such varieties being in reality no more than the necessary consequence of individualisation and manifoldness. If each individual differs, and must differ,

by something from all other individuals of the same genus, the accumulation of these differentiating somethings leads naturally to the formation of what is called a species. We may then speak, for instance, of different varieties or even species of horses, including the three-toed hipparion; but there is but one ἱππότης, if we have but the eye to see it, as Plato used to say.

I hardly venture to say whether I know all this, or whether I only believe it. I cannot help seeing order, law, reason or *Logos* in the world, and I cannot account for it by merely *ex post* events, call them what you like—survival of the fittest, natural selection, or anything else. Anyhow, this Gnosis is to me irresistible, and I dare not therefore enter the camp of the Agnostics under false colours. I am not aware that on my way to this Gnosis I have availed myself of anything but the facts of our direct consciousness, and the conclusions that can be logically deduced from them. Without these two authorities I do not feel bound to accept any testimony, whether revealed or unrevealed. It is history alone which can tell us how these ideas arose and how they grew from century to century. What I have tried to do, however imperfectly, is to discover the causes which in the history of the world have led men to accept what, according to some philosophers, rested neither on the evidence of their senses nor on the logical conclusions of their reason. I have lately attempted to trace these causes and their historical progress in my Gifford lectures, more particularly in the last volume, called *Theosophy* or *Psychological Religion*. In one sense I hope I am, and always have been, an Agnostic, that is, in relying on nothing but historical facts and in following reason as far as it will take us in matters of the intellect, and in never pretending that conclusions are certain which are not demonstrated or demonstrable. This attitude of the mind has always been recognised as the *conditio sine qua non* of all philosophy. If, in future, it is to be called Agnosticism, then I am a true Agnostic; but if Agnosticism excludes a recognition of an eternal reason pervading the natural and the moral world, if to postulate a rational cause for a rational universe is called Gnosticism, then I am a Gnostic, and a humble follower of the greatest thinkers of our race from Plato and the author of the Fourth Gospel to Kant and Hegel.

F. MAX MÜLLER

THE ESTATE DUTY AND THE ROAD ROUND IT

THE sweeping provisions of the Finance Act of 1894 affect so seriously the prospects and property of so large a number of people that it becomes a matter of importance to ascertain with accuracy how far it is now possible for a man to transmit his property to those who are the intended objects of his bounty without allowing them to be liable to pay the heavy Estate Duties imposed by the Act.

Of the numerous methods of evading the Act I do not propose to treat, but only of some of those means of dealing with property which will without doubt stand the test of litigation when all the facts are known to the Court.

In the first place, a man may, by investing his money in land abroad or in the Colonies, escape the duty altogether, whether on the land itself or on legacies charged thereon; for the second subsection of the second section of the Act provides that:

> Property passing on the death of the deceased when situate out of the United Kingdom shall be included only if, under the law in force before the passing of this Act, legacy or succession duty is payable in respect thereof, or would be so payable but for the relationship of the person to whom it passes.

This method of investment is not likely, however, to commend itself to many Englishmen, though colonists domiciled in England (a large and increasing body) will probably use it to a great extent in preference to reinvestment in English land or securities.

In the second place, he may avoid the duty by conveying (more than twelve months before his death) the property, or any part of it, to some other person absolutely. To this method there is the obvious objection that, if the person to whom the property is conveyed dies first, the Estate Duty will become payable even sooner than it would otherwise have done, although it may very probably be at a lower rate, since the object of the bounty is, in the majority of cases, likely to leave a smaller property than the person giving the property would have left had he retained everything in his own hands.

In the third place, he may avoid the duty to a limited extent only by settling the property, reserving a life interest to himself. In this

case Estate Duty and a further duty of one per cent. become payable on his death; but section 5 subsection 2 in effect provides that thereafter no duty shall be payable until the various life interests under the settlement are exhausted. The subsection is as follows:

> If Estate Duty has already been paid in respect of any settled property since the date of the settlement, the Estate Duty shall not, nor shall any of the duties mentioned in the fifth paragraph of the first schedule to this Act, be payable in respect thereof until the death of a person who was at the time of his death, or had been at any time during the continuance of the settlement, competent to dispose of such property.

And the duties referred to as the duties mentioned in the fifth paragraph of the first schedule to the Act are the 1 per cent. legacy and succession duties.

This method will no doubt be adopted by many people, but it does not wholly, or nearly wholly, avoid the heavy Estate Duty; and I come now to a method of dealing with property which I have not yet heard suggested by any one, but which will, without the slightest doubt, remove the property dealt with by it from any possibility of liability to any existing duty of any kind for very many years, in some cases possibly for as many as sixty or seventy years.

I arrive at my method in this way: The scheme of all the Death Duty Acts is, and ever has been, to deal with property the passing of which is regulated by the time of a death. It is only necessary to adopt a method by which property shall never pass on a death, but only upon some other event, to render the property altogether free from death duties.

For the accident of death I substitute a change of intention on the part of the settlor, or on the part of those whom he selects to succeed him, not in the ownership, but only in the distribution of the property.

I create what we lawyers call a discretionary trust. Of such a trust the settlor himself can be one of the trustees, or even the sole trustee; for the third subsection of section 2 is as follows:

> Property passing on the death of the deceased shall not be deemed to include property held by the deceased as trustee for another person, under a disposition not made by the deceased, or under a disposition made by the deceased more than twelve months before his death, where possession and enjoyment of the property was *bonâ fide* assumed by the beneficiary immediately upon the creation of the trust, and thenceforward retained to the entire exclusion of the deceased or of any benefit to him by contract or otherwise.

By the trust deed (which must be executed twelve months before the death of the settlor) the settlor vests the property to be settled in the names of trustees and directs them to receive the income, and, in their absolute discretion, either to accumulate it from time to time (within the limits allowed by law), or to pay it, in such

proportions as they think right, from time to time to any one or more of certain named persons.

It is, perhaps, more easy to explain precisely what I mean by the aid of an example. A.B., aged seventy, has a wife aged sixty, some children aged from thirty to forty, and some young grandchildren. He has also, perhaps, a brother and a cousin or two, and he has a million of money to dispose of. The money, being invested at an average of, say, 3½ per cent., yields him an income of 35,000*l.* a year. The Estate Duty would be 80,000*l.*, or more than two years' income of the property. Now, for a sum of 260,000*l.* he can buy himself a Government annuity of 35,000*l.* a year, and this he does. The remainder of his property (740,000*l.*) then yields, at 3½ per cent., 25,900*l.* a year. A.B. being aged seventy, his expectation of life is, as nearly as possible, eight and a half years; and if this 25,900*l.* a year is accumulated at compound interest during the remainder of the period at 3½ per cent., the result will be about 246,000*l.* So that, at the time of his death, the capital of 1,000,000*l.* will remain intact but for the small deficiency of 14,000*l.*, and he will have enjoyed a sum equivalent to the full income during his life.

It remains to show how this scheme can be carried out without incurring any liability for Estate Duty. A.B. first sells out his 260,000*l.*, and purchases for himself a Government annuity of 35,000*l.* a year. Having done this, he has, so far as he is concerned, secured to himself for life the income which he has always enjoyed. He then vests in trustees the whole of the remaining 740,000*l.* upon trust in their absolute discretion, either to accumulate the money at compound interest, or to pay the income in such shares and proportions as they, in their absolute discretion, shall think fit to any one or more of the persons named in the settlement. The persons named in the settlement will be the wife, the children, the grandchildren, the brother, and the cousins, and all the children of every one of these. On the decease of the last survivor of the wife, the children, the grandchildren, the brother, and the cousins, the capital moneys will be payable in such shares as the trustees think best among the children of all these persons. By this scheme no person takes any vested interest in the trust funds, and no duty can become payable until the wife, children, grandchildren, brother, and cousins are all dead.

It would be necessary to choose the trustees with extreme care and discretion; but so long as they had the full legal power to exercise their discretion, there is nothing to prevent the settlor (A.B.) from indicating to them in what manner he would like them to dispose of the money; and, in effect, with trustworthy persons, all the advantages of a legal trust would be obtained, with the additional advantage that no beneficiary's income could ever be seized by creditors, because he would have no actual right to it. Of course, also, the trustees would be under no legal obligation to accumulate the income during A.B.'s

life, but they would doubtless obey his wishes; and he could, as I have shown, be one of the trustees, or, indeed, the sole trustee.

If A.B. lived beyond the average expectation of life, the estate would profit the more, while the contingency of his dying sooner could be provided against in many ways.

I have perforce illustrated my scheme with arbitrary figures, but much the same result would, with certain limits, be obtained with a different age and different rates of interest. It is not a scheme likely to be adopted by a young man; and, if it were, the annuity might be cheapened by making an annuity to be paid only in the event of his surviving his wife, by whom a first life interest under the settlement would in effect, though not in law, be taken.

On the figures as shown by me, a duty of 80,000*l.* would be saved at an expense of only 14,000*l.*, an economy sufficient, I imagine, to tempt even the poor millionaire, much more the man of large wealth.

The method is, of course, equally applicable to parts of a property, and by reducing a large property the heavy duties arrived at by aggregation are avoided. Some modifications of my method will naturally suggest themselves in dealing with various kinds of property, but the underlying principle of a discretionary trust is, I am convinced, an admirable one. Often and often have I seen the ruin which a man's follies or misfortunes would otherwise have brought upon him avoided by one of these simple and excellent trusts, and the sweeping provisions of the new Finance Act provide this trusty friend with yet another use.

A. H. Hastie.

THE MUSIC OF JAPAN

THERE is scarcely any art, custom, or social usage amongst the Japanese that we have not, at some time or other, censured as barbarian or scoffed at as grotesque. A few years ago, no one dreamt of praising their art; their drawings were laughed at, as the pitiful imaginings of a people devoid of the rudiments of form; their colouring was deemed crude; their dress droll enough to tempt the masquerader; their semi-shaven heads and tightly twisted little knots of hair convulsed the rest of the world; their paper pocket-handkerchiefs met with derision; and every custom, indeed every act, of these far-Eastern natives was weighed in the scales of Western civilisation and found wanting.

To-day Japan and the Japanese are in the ascendant; the art amateur covers his walls with the *Kakemenos* which erstwhile were so despised; the robes and drapery worn in this Land of the Rising Sun are eagerly purchased by wealthy people, who believe them to be indispensable in the matter of decoration; the pocket-handkerchief has been acknowledged to be a more sensible institution than our linen ones, since it requires no washing, incurs no initial outlay. We have not, so far, adopted the *coiffure* nor copied the tonsured cranium, but we have come to a more just appreciation of many of these quaint customs, and, in some instances, to something like a genuine admiration of them.

Of the music of Japan we are still woefully, I am afraid wilfully, ignorant; we are content to call it hideous, inharmonious, inartistic, and monotonous. Amongst many writers on the subject, only three or four can be found to praise it. Comparison between such music as the Japanese and that of European countries is obviously unfair, and sympathetically inartistic. On the one side, we have the best that a highly developed æstheticism can command; we have organs of powerful grandeur, orchestras of almost phenomenal strength, our stringed instruments are fashioned either by the experts of musical Italy, or replicad from those which have served the greatest musicians the world has known. In material, in form, in tone, in veneer, they are unsurpassed; our pianos seem as though they had reached even the stretched limits of perfection, and of teaching and criticism we touch the highest latitudes.

On the other, we have a few paltry string and percussion instruments, made by those who are unlearned in sound-producing properties; no literature of harmony, since it would be useless, the blind being the principal musicians in Japan; no grand masterpieces of musical history; no striving to touch, by means of the divine art, the deepest sentiments in the human mind; for this light-hearted nation are not likely to be moved by anything which can measure its existence by longer time-beats than the mere evanescence of momentary pleasure. In Japan, music serves to bring the smile to the cheek of the maiden, to preface the banquets of the Japanese nobility, and to accompany the mazes of the dance.

It is, in fact, a record of the trivialities of the daily routine, and perhaps the inferior position which music occupies in Japan is best shown by the fact that its chief, and until quite recently only exponents, are women, and women in this country are still treated as an infinitely lower sex than the men. Most men would consider that they were making themselves ridiculous by playing or singing in society. As against this accumulation of adverse criticism on the music of Mikadoland we must set one or two strong points in its favour. To begin with, it reflects in many ways the quaintness and the national grace of its promoters, it is, therefore, characteristic and individual; then again, Nature in Japan is a silent teacher, singing-birds are rare, the most frequently heard being the unmusical crow, the air and the water seem motionless, and the result of this wan and weirdly-peaceful environment is a peculiarly calm and monotonous style of music.

If the Japanese are so particularly unmusical as we would have them be believed, how is it that the 'Koto,' the most difficult instrument under the sun to tune and to keep in tune, is managed by them with faultless accuracy? There are thirteen moveable bridges to the Koto, and yet it is the rarest thing for a player to make a mistake; the tuning testifies to a most sensitive ear, and the playing to a painstaking and alert intelligence.

It must be conceded that the instrumental music surpasses vocal, the voice being rough and strangely unmelodious. Mr. Pigott says:

> Words would fail me were I to attempt to do justice to its peculiarities. It is mere horrid sound, disfigured by excruciating quarter tones. Nor have I ever found a Japanese express any admiration for it. It is accepted and tolerated. But again there comes uppermost that perplexing query, how the curious mixture of sweet and unsweet sounds has been suffered to endure.

Other writers on the Japanese fully endorse Mr. Pigott's statement, some expressing their opinion in even more candid terms.

Sir Edwin Arnold, who has ever a kind word for these people of Nipponland, says:

> As for Japanese music, there is not much to praise in it. The Samisen twangles everywhere; but its effects are terribly meagre. The airs played are sadly mono-

tonous; the only time is common time; there is no harmony; and though Japanese women have delightful voices, rendering their language always musical, the style of singing which they adopt is forced, nasal, and unnatural.

However, we are speaking of the music of Japan, not of the voices of its people; as Hazlitt says, 'After all, the only things which last here below are words.'

The charming legend which tells of the origin of music in Japan is worthy of mention in even a fragmentary appreciation of these far-Orient melodies. Briefly, then, the sun-goddess Amater Asu, in resentment of the violence of an ill-disposed brother, retired into a cave leaving the universe in anarchy and darkness. Eight million deities came to persuade her to reconsider her cruel decision. She remained, however, obdurate; until one god, apparently more endowed with subtlety and a knowledge of the emotional nature of the *déesse incomprise*, took six long bows and bound them together, twanging their strings to attract the attention of the self-imprisoned and unreasonable Amater Asu; then he retired to seek the lovely Amé No Adsumé, who approached the cave's mouth and waved some bamboo branches; gradually she began to sing and dance to the rhythmical movement of the branches, and out came the angry goddess. To insure the benefit of sunshine to the future generations, Amatsumora, the ironsmith, made a magic mirror which he hung at the entrance to the cave, so that Amater Asu could never hide her face again. This is the incantation which fell from Amé No Adsumé whilst waving the branches:

Hito, futa miyo,
It su, Muyu, nano;
Ya, kokono, tari,
Momo, chi, yorodsu.

Gods, watch the entrance.
Here is Her Majesty—the goddess.
Shall not joy fill our hearts
When my charms shall have proved all-powerful?

To trace from the beneficent Amé No Adsumé the history of Japanese music would prove an impossible task in a limited space. Suffice it to say that it is an art borrowed almost without exception from the Chinese, grafted on to Japanese civilisation and here and there improved by flashes of the national daintiness which is so alien to the celestial's nature. It is an endless source of pleasure to the natives, and although we find it so lacking in much that our more scientific culture deems an integral part of a musical system, to them it is satisfying and convincing.

We are taught to note cadences unfamiliar to us, and tones which we must label new present themselves for our instruction in

these songs of the 'Great August Country'; hence, should we not be grateful?

In speaking of modern Japanese music it would be quite impossible to overrate the importance of the Biwa, or, as it is often called, the 'Hei-Ké-Biwa.' Briefly, the history of the Biwa runs thus. It was imported from China about A.D. 935; in its original form it was ponderous and rich in tone, but once under Japanese fingers it changed its form if not its tone, it became graceful, refined, and lighter. It was first naturalised in Satsuma, and thus it is frequently spoken of as Satsuma-Biwa. It is essentially a harmonic instrument, and is well suited to the burden of songs dealing with love and war which are in such vogue amongst the Japanese. Many of the modern songs now set to the Samisen owe their origin to the Biwa.

The Shakuliachi, also a Chinese instrument, came to Mikadoland early in the fourteenth century, and save as an occasional accompaniment to the Samisen, which is the instrument of the people, it is always considered a solo instrument. It is peculiarly sweet and soft in tone, and may be classed as the musical antithesis of the Hichiriki. The pipes of the Shō give forth also some strangely delicate notes. The drums and the gongs are full and sonorous in tone, and if only Japanese orchestras were not composed of so many different-sounding organs, we might find more to commend them to Western ears.

The Koto music may perhaps stand as synonymous with modern Japanese. Koto-Uta are songs for the Koto; the Koto seems to have freed the national music from the burden of Chinese influence, it is more definite in tone, purer in *timbre*, and aptly interprets the graceful, if somewhat quaint ideas of the natives.

That most admirable authority on Japanese music, Mr. F. T. Pigott says of these modern or Koto songs:

> Among the popular songs, the point which seems to me of interest is that there is so much in them which not only is easily retained by Western memory, but which distinctly satisfies the canons of Western taste. Many are the little haunting melodies one hears tinkled in the street; many a one even commends itself to the whistling Briton. Is not this indeed, as one has somewhere said, one of the tests of the true inwardness of music?

But there are also classical compositions set to the Koto as well as those of lighter vein. These are of high quality, requiring attention from the listener, and some musical knowledge. These compositions are often performed as an interlude to a feast, and therefore the opportunity for more practical appreciation on the part of the stranger is not a timely one.

For a very interesting study of the Koto and its music reference should be made to Mr. Pigott's work on 'The Music of the Japanese.'

Two very favourite songs for the Samisen should enable amateurs to judge of this most popular type of drawing-room music in Japan.

No. 1

No. 2

Some fragments of the songs which the Japanese troops are singing on their way to meet their foes of the Celestial Empire reach us from time to time. To the uninitiated Western they seem strange productions, but, doubtless, they create the animus they are intended

to do, and, in any case, by their roughness and uncouth rhythm bear the impress of being genuine war songs.

Like most nations, the Japanese have had their war songs from the time they had any existence as a people, but we are told that the lyrics which were used by the soldiers in the time of the first great Emperor of Japan, Jimmu Tenno, 660 B.C., were particularly rhythmical and finished. Japanese songs, with the exception of the heroic or historical ones, are all short, and when these are sung in times of peace they are set to the Koto.

The first of these up-to-date martial songs is entitled:

Gallant Warriors.

If warriors go to war by land, the turf shall receive the bodies of the slain. If warriors go to war by sea, the ocean shall receive the bodies of the slain. From time immemorial our gallant warriors have gone forth in swarms. Human life lasts but for fifty years; who would wish to purchase a few miserable years of life at the cost of dishonour? March and fire as long as breath remains, for our lives are at the disposal of the Sovereign, our bodies are to be sacrificed to the glory of the country; let soldiers die with all their wounds in front. The souls of those who thus defy Death shall be through the ages to come the guardian angels of Oriental tranquillity. So, go forth, go forth, ye warriors; warriors, go forth!

The second battle song, which is distinctly of very recent date, is:

To Pekin.

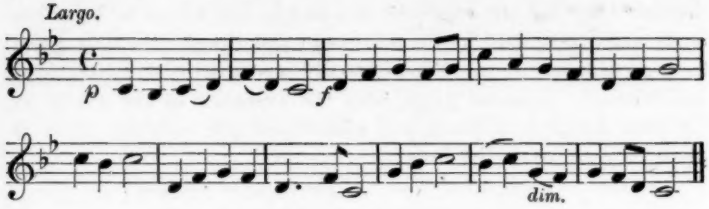
China is a country where in bygone days teachings of sages prevailed; but as time rolled on the country has become retrogressive. It boasts of itself as the Celestial Kingdom, but its heart is barbarous and is the very reverse of celestial. Till its ignorance is dispelled the sky of the Orient must ever be dark. Now is the time to plant the flag of the Rising Sun on the walls of Pekin, and to illuminate its darkness. This is the duty of our glorious Empire, the Land of the Rising Sun. Go forth, go forth, Imperial Army! March in emulation till Pekin is taken!

Like many other old customs and institutions in Japan, the barbaric instruments which were used in battle have fallen into desuetude, owing to the rapid strides made in Western civilisation. They used to have a number of hollow drums and extraordinary trumpets, shaped like univalve shells. They were used to summon the troops and to lead them on to battle; the metal gong and drum whilst in camp, and another kind of drum and shell trumpet when on the march.

The modern band attached to the regiment is modelled on that of France, where drums preponderate and where the trumpet is an important factor. The Japanese bandsmen are adepts at this kind of music, and the troops strive to keep time to their tunes whilst marching.

Japanese National Anthem.

'Kimi-Ga-Yo' (Reign of my Sovereign).



Translation.

May our Emperor's reign endure,
Stand increasingly secure.
True and fast shall it last
Till a million years have past.
Thus shall he praised be to eternity.

Just as leaves by autumn sown
Red and fair to earth are blown,
Just as these never cease
Year by year to shed their peace,
Thus shall he reign to see eternity.

Although 'Kimi-Ga-Yo' is not always looked upon as a war song, still it should be noted that it was composed during the seventh century, to stimulate the Japanese armies. The English translation, which is given here is by Mrs. Antonia Williams, and is to be found in 'Miyako-Dori'—Japanese melodies collected by Paul Bevan, M.A., the Hon. Treasurer of the Japan Society in London. It was composed by an emperor and written by an empress, and is the official air of Japan, being frequently heard at functions where the Japanese element is represented.

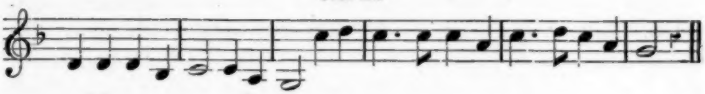
By kind permission of Mr. Bevan, I am able to give the War Song of the Imperial Army of Japan, 'Miya Sama,' to which the troops of the Emperor went to victory in A.D. 1868, when the struggle which for some time had convulsed the country, terminated in the restoration of the Imperial power, and inaugurated the dawn of New Japan.

Sir Arthur Sullivan has rendered the air familiar to most of us in the *Mikado* (Act ii. No. 5):

Miya Sama.

Alla marcia.

Chorus.



Miya Sama, Miya Sama,
O-Umano mayeni
Pira Pira Suro nowa
Nan jaina?

Chorus:

Toko tonia, re tonia a rena.

Are wa choteki.
Seibats seyo tono.
Nishiki no mihata
Wo Shiranaika?

Chorus:

Toko tonia, re tonia a rena.

Prose Translation.

O my Prince! O my Prince!
What is that fluttering in the wind
Before your Imperial Horse?

Chorus:

To-koto-nya, Re-tonya, rena.

This is the signal for chastising the Rebels.
Know ye not
Those three Standards of Brocade?

Chorus:

To-koto-nya, Re-tonya, rena.

To go back to those feuds of the Gengi and the Heiké which are often spoken of as the Japanese 'Wars of the Roses,' and which date from the twelfth century, we find some evidences of song being used to animate the troops amongst the literature of those martial times. For instance, the following was composed by a Japanese warrior named Take-da Daï-zeu-no Daï-bu Haru-nobu A-son, who lived in the reigns of Nara the Second and of Oko-ki-Matsi, under the sway of the Imperial Gengi. The short title to this abbreviated song is

The Man

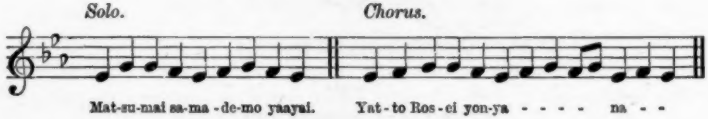
Man is the true fortress,
Man is the wall;
Man is the rampart.
Good deeds are friendship;
Evil deeds are enmity.

Another branch of song which merits a place amongst the national lyrics of a country is that peculiar to the sailors and the fishing population. Like most sailors, the Japanese seem to take take great pride in handing down to posterity the noble deeds of their compatriots, and the bravery of the chieftains who ruled the land in feudal times forms the theme of many of their sea songs. These are mostly in very slow time, and set in a minor key—that is with few exceptions. They are, as a rule, formed of chromatic passages, with but scant variation. Occasionally, the lowering or the raising of a tone is unexpectedly introduced; in some there is a continued series of shakes and trills, producing an extraordinarily weird effect, more especially as the minor key is adopted.

Apparently, the fact of being sung by the sailors of one particular port is quite sufficient to insure a sort of local importance to any song, or, as we should call it, 'chanty.' Now and again, the Japanese bluejackets carry these songs with them to far-distant seas, and their popularity is consequently disseminated. But in one or two harbours, the prerogative of singing them is retained.

The harbour of Matsumai is responsible for the following chanty, which is used by the men when lifting heavy cargo. Matsumai is the name of a great feudal chieftain of enormous strength and such daring that no one could rival him. While the solo is being sung, the chorus hold themselves in readiness either to pull the ropes or to heave, as the case may be.

Matsumai (Sailors' Song).



Leader. Matsumai, sama, demo,
Nindzu-niya Kanawanu yoitana.
Chorus. Ariya, ariya, yoitoko, yoitoko, riya, riya, riya.
Leader. Medeta, medetano yo-a-yei.
Chorus. Yatukosei yomyamà!
Leader. Medeta, medetano, wakamatù.
Chorus. Ariya, ariya, riya, riya, riya.

The same notes are used during each stanza.

Quite peculiar to the marines of Mikadoland is a song sung during a calm at sea, when work is, for the time being, suspended. As this may be said to be a lyric of leisure rather than a chant of labour, it is given entirely by the chorus, only such songs as accompany heavy work being in the form of alternate soli and chorus. Probably such a composition as 'Nagareyma' would appear to us very monotonous,

there are so many verses and only a very slender chain of melody to bear them.

Nagareyma.

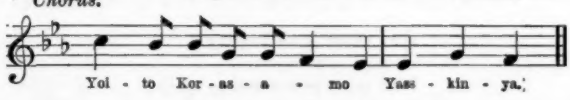
Nagareyma, naggarete ritaka,
Nagareyma, nagaretewo ronai,
Murano nadesoya
Medetaimonowa ofunadama,
Asa, oroshi banniwa, Koganeo
Isumifuruiso.

Nagareyma is a place celebrated for its wine, and the song describes the sailors taking this wine away to distant countries, and bringing back in exchange for it gold and treasures. In the same song an allusion is made to a very quaint custom which they have in Japan of placing, when the ship is launched, some maiden-hair fern and rice close to the masts; the former is, of course, almost regarded as sacred in Japan, and rice takes the place of bread in England, therefore they choose these as omens of good luck, or as 'gods of the ship.'

The monotonous cry which comes next is sung in chorus when holystoning the decks. I believe that it is the only one of the kind which is heard amongst the Japanese.

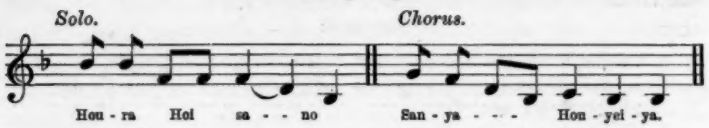
Holystoning Chorus.

Chorus.



Amongst the most pleasing of the songs of this interesting people are those of the oarsmen. These are principally sung on the *sampans* those partially triangular-shaped boats, not unlike the salmon-fishers' punts used on some of our rivers. The *sampan* is sculled, not rowed, by two or four men with very heavy oars, and they stand up using their thighs to rest them upon. As I have only taken down these few notes from a Japanese waterman, who appeared to be unable to give the same tune, if such it may be called, twice in succession, it is not possible to be quite accurate in it. As to the meaning of the words, a very distinguished member of the Japanese Naval College, perfectly cognisant of English, assures me that they have none. The chorus is to give emphasis to certain strokes, and it is repeated alternately with the solo, without change of either words or air.

Rowing Song.



It is only on board of the merchant vessels that singing is permitted; the Japanese navy not allowing the practice on the men-of-war, a band takes the place of the chanty.

Barcarolle.

The two following lyrics are excellent specimens of Japanese songs, the first being especially popular with the almond-eyed Mousmee, with whose charms Sir Edwin Arnold has made us so familiar:

Yes! eager is my longing
To look upon thy face,
With thee some words to speak!
But this I must renounce;
For should it in my dwelling
Once chance to be divulged
That I with thee had spoken,
Then grievous were the trouble
Would surely light on me:
For certain my good name
Were lost for evermore.

Song.

Upright in heart be thou and pure,
So shall the blessing of God
Through eternity be upon thee.
Clamorous prayers shall not avail,
But truly a clear conscience,
That worships and fears in silence.

The charming songlet which is so popular amongst the young people in the empire, known as 'The Flower or the Maiden,' runs thus:

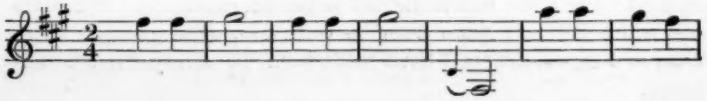
Last night the peach-blossom was watered by the rain;
At dawn the pretty girl arose and left her chamber.
She plucked a peach-flower, and placed herself in front of her mirror,
To dispute the palm of beauty with it.
She asked a young man which of the two he deemed the more lovely,
The flower or the humble maiden?
The young man replied:
'The beauty of the flower is incomparable.'
The young girl, hearing this, became angry;
She crushed the flower between her hands,
Throwing it at his feet:
'I do not think this dead flower can be compared to a living person.
However, seigneur, if you wish to appreciate the charms of this flower,
I advise you to take her as your mistress.'

Monsieur Aimé Humbert quotes the next specimen as a type of song much in favour amongst the Japanese:

Popular Japanese Song.

The two selections which follow, 'Saita-Sakurai' and 'M'me wa saitaka,' are amongst the simplest and earliest tunes which the embryo Japanese musician learns. They are played either on the Koto or Samisen. Familiarity from their childhood upwards renders these airs particularly favourite ones in Japan, and they are as well known as the strains of the National Anthem itself.

Saita-Sakurai.



8va
M'me wa saitaka.
M'me - - Wa sai - - ta - ka sa - ku - ra wa-
mada Kai - na. Ya na - -
gi ya yo - na yo - na Ka-sa schi - dai - - -
Yama buky - a u - wa-ke i - ro ba - ka-ri scho(n)gai na.

Monsieur Léon de Rosny, in his *Anthologie Japonaise*, 'Si-ka-zen-yô,' gives some charming examples of the national poetry, and amongst them a few which are set to popular melodies. The little song which follows I quote from his collection, with apologies for so brusque a translation as I have made from his dainty French rendering.

The Invitation.

Japanese Melody.

Kiu-siu daï-itsi-no mûme,
Kou-ya Kimi-ga tame-ni hiraku.
Hána-no sim-gi-wo siran-to hosseba,
San-kô tsûki-wo funde kitare.

Seigneur, this night for you shall open
The first flower of the plumtree of the Isle of Kiousiou.
If you would wish to have all the beauties of this flower revealed to you,
Come, singing to the moon, at the hour of the third watch.

Monsieur de Rosny says that the word 'moon' in Japanese and Chinese poetry nearly always contains some idea of love.

The words are by a courtesan of Nagaski.

Mr. Stoddart, an American poet, has versified the following song, which is a general favourite with the Japanese of all classes.

The Flown Bird.

The maple leaves are whirled away,
  The depths of the great pines are stirred,
Night settles on the sullen day
  As in its nest the mountain bird.
My wandering feet go up and down
And back and forth from town to town,
Through the lone woods and by the sea,
To find the bird that fled from me.
I followed, and I follow yet;
I have forgotten to forget.

My heart goes back, but I go on
  Through summer heat and winter snow.
Poor heart, we are no longer one;
  We are divided by our woe!
Go to the nest I built, and call—
She may be hiding after all—
The empty nest, if that remains,
And leave me in the long, long rains.
My sleeves with tears are always wet;
I have forgotten to forget.

Men know my story, but not me,
For such fidelity, they say,
Exists not; such a man as he
Exists not in the world to-day!
If his light bird had flown the nest,
She is no worse than all the rest.
Constant they are not—only good
To bill and coo and hatch the brood;
He has but one thing to regret—
He has forgotten to regret.

All day I see the ravens fly,
I hear the seabirds scream all night;
The moon goes up and down the sky,
And the sun comes in in ghostly light.
Leaves whirl, snowflakes about me blow:
Are they spring blossoms, or the snow?
Only my hair! Good-bye, my heart,
The time has come for us to part;
Be still! you will be happy yet,
For death remembers to forget.

The pretty ideas which Nature seems to unfold to the Japanese are charmingly exemplified in these lines. Some people have a theory that the Japs are inclined to travesty Nature, to make light of her most grandiose attributes, painting ridiculous landscapes with dwarfed trees, hillocks for mountains, and infinitesimal pools for lakes, all within the narrow limits of a cottage garden, but it is only because they love her, and feel as though they could treat her as they would an indulgent and beneficent mother. Familiarity in this instance is very far removed from contempt. The Japanese are much too artistic in the senses of colour and of form to be unappreciative of the greatest harmonist the world knows.

The song which follows was taken down from some young medical students who were visiting America, and with whom it was a great favourite. There is a rattling chorus, into which the Japanese threw extraordinary vigour and enthusiasm, and which was sung in unison. I give the opening stanza, with its English equivalent, of the song, which treats of the different months of the year, each month having its own particular stanza.

Song of the Seasons.

He to tsu to yah,
He to yo a ka deba,
Nekhee ya kadé,
Nekhee ya kadé,
Ka za du ta té ta ru,
Matzu ka zadu,
Matzu ka zadu!

Translation.

First Month.—The last night of the year has passed. To-morrow crowds will assemble for the holiday. Let us erect before our doors the beautiful fir-tree.[1]

Japanese Song of the Seasons.

The next are chansonnettes sung to the Samisen, which I quote from *Japonica*, Sir Edwin Arnold's charming collection of scenes from Nippon:

Haori Kakush te
Sodé hiki-tomète
Dô demo Kiyo wa
Ii tsutsu tatté
Renji mado.
Shoji wo hoso-mé ni hiké-aketé
Are miya san sé
Kono yuki ni!

She hid his coat,
She plucked his sleeve:
'To-day you cannot go!
To-day, at least, you will not leave
The heart that loves you so!'
The Mado she undid
And back the Shoji slid,
And, clinging, cried, 'Dear Lord, perceive—
The whole white world is snow!'

Here also is a fragment of a love song:

Shote wa jôdan
Nakagora giri de
Ima ja tagai no
Jitsu to jitsu.

First 'twas all a jest,
Then 'twas daily duty;
Now 'tis at its best
True faith, tender beauty—
Both quite love possessed.

[1] The display of fir-trees and bushes before the threshold of a Japanese household is a feature of the New Year's festivities in the land of the cherry-blossom.

The orchestra of a modern Japanese theatre is composed of two Samisens (which were first used in the theatres to accompany incidental songs in 1640), one flute, three drums, the Uta-daiko, the O-tsuzumi, and the Ko-ts-uzumi; the two latter being played by the same performer, as they are not required at the same moment. Wallaschek, in his *Primitive Music*, makes a quaint remark on the playing of the Samisen by young ladies in Japan. He says:

> The chief instrument of Japanese young ladies of 'quality' is the guitar (*Samisen*), and this they take to every entertainment, where they play upon it, one after the other, and sing. So it seems that in Japan, too, the poor guests have their musical troubles.

The 'Bells at Dawn' is frequently heard on the orchestra in the theatre, so it may not be inappropriate to give it here.

The Bells at Dawn (*Aké-No-Kané*)

The trade or labour songs of the Japanese are very numerous, incorporating almost every kind of work in this harmonic union. There are songs for the water-carriers, for the rice-planters, the tea-pickers, for the girls who pound the grain with pestle and mortar; even the night-watchman sings and plays hourly tunes on a bamboo rattle. The flower pedler, the chair-carrier, the coolie, the workers in brass, in gold, silver and copper, all drone some kind of song over their work in this country of the gods—Kami-no-Kuni.

A specimen of a harvest song may prove interesting.

Honen Uta (*Harvest Song*).[2]

Choya kina, choya kina,
Cho choya kina, kina,
Cho chowa nanohadé,
Cho chon no hoi.

Choit kina, choit kina,
Choit choit, kina kina,
Chochoi no yoiyasadé
Cho choi no choi.

The songs and chants of the Ainu do not run in any fixed notes or tones, they recognise no scale, consequently it is almost an impossibility to fix any of the fugitive melodies of the hairy aborigines of Japan. Although very high development of the musical powers of the Ainu is not to be expected, yet it may be admitted that there is much of beauty in the tunes to which are set the recital of numerous acts and experiences. The women and girls have good voices, and their singing is by no means disagreeable. They have a curious

[2] From Mr. Bevan's collection.

fashion, on returning from a journey, of sitting down and singing or chanting for hours that which has happened to them whilst away. In turn they are vocally informed by their friends of what has taken place in their absence, what children have been born, what deaths and marriages have occurred; how the fishing, and hunting, and gardening has gone on, &c. The words are for the most part quite unmetrical, and rhyming is almost unknown. The instrument these simple but indolent people use is somewhat like a guitar; it is made of three or six strings, formed of whale's sinews, which have been cast upon the shore. Frequently Nature is the only audience the Ainu has for his song, but she is a kindly critic and a silent one.

A piece for the Koto, of somewhat ancient date, is appended.

Fudjiyu for the Koto (Ancient Melody).

The whole piece must be played an octave higher.

And so to the music of the Land of the Rising Sun, the cradle of Eastern civilisation and the home of some of earth's fairest products—Sayonara!

LAURA ALEXANDRINE SMITH.

NEW SOURCES OF ELECTRIC POWER

ELECTRIC ENERGY DIRECT FROM THE COAL-FIELDS

In a recent article in the *Times* it was stated that, if the history of the present century could be represented by the use of one word, that word would be steam.

Probably the word invention would more adequately represent the source of the great changes in the social and industrial life of this last century; nevertheless, the word steam brings to mind at once the colossal effects that this power-generating agent has produced, crushing out of existence nearly all the other agencies that man relied upon to assist him in his work, and providing in its *ensemble* of application an equivalent power for work that could not be equalled by millions of able-bodied men.

More than ever, in this era of industrial struggles, cheapness of power is likely to be the principal and all-important factor of value in fixing upon suitable sites for the establishment of new industries.

For the production of power for industrial purposes one of three natural agencies is usually employed; *e.g.* the fall of water; the influence of wind currents; and the development of work by the production of heat by the combustion of coal or other forms of available fuel.

In England, the secret of our industrial greatness and, in a measure, the cause of our commercial supremacy, may be revealed in our unrivalled facilities for the production of power by the third agency, or heat-power.

Our splendid fuel resources permitted our ancestors to obtain full justice for the fruit of the inventive genius of Watt, Trevithick, Stephenson, Crompton, Kay, Arkwright, and others, enabling our manufacturers to flood the world's markets with the marvellous products of our looms and of our forges, through an era of unexampled prosperity that extended over a quarter of a century.

In this golden period of prosperity our people accumulated enormous wealth, a great part of which is invested in foreign bonds and railway developments. The extent of this wealth will be realised when it is known that in our country income-tax is paid on 764,000,000*l.* of foreign Government stocks.

This enormous wealth-potential could not have been accumulated had we not had the mineral treasures in our coal-fields; and every discovery, invention, or scientific application that will assist in increasing the value of these mineral treasures becomes at once of national importance.

A discovery in applied science that deserves to rank with the invention of Watt for the utilisation of steam-power purposes was the invention by the illustrious Michael Faraday of the dynamo electric-generator.

The value of this invention of 1826 was increased beyond all calculation by the accidental discovery, in 1873, of its reversibility.

It appears that the Gramme Electric Company were exhibiting two dynamo electric-generators at the Vienna Exhibition for lighting purposes.

One of these machines was in motion, the other idle; a workman, seeing some electric cables trailing on the ground, and thinking they belonged to the second machine, connected the cables to the terminals of this second and inactive machine. To his surprise, the armature of this machine *commenced to revolve*, proving the reversibility of the dynamo electric machines.

This discovery will have an effect on civilisation that cannot be weighed or foreshadowed. Great as have been the influences of the use of steam-power on modern life and civilisation, compared with the possibilities of electric energy as *the* method of applying and transmitting power the influences of steam will become almost trivial.

When it is understood that power can be generated in one locality, and that this power can be transmitted by suitable conductors to distances of over 100 miles, and delivered with at least 75 per cent. of the original power, the possibilities of application of this new agency for transmitting energy may be realised.

This fact of modern applied science, proved as it was to the hilt by the famous Lauffen-Frankfort experiments of electrical transmission over 112 miles, has permitted waterfall sources of power to be utilised; and in no country more than Switzerland, where the influence of the magic energy has been most beneficial, and languishing industries in this Alpine region have not only been stimulated, but the interesting and romantic Swiss race has taken time by the forelock in applying to the full the bounty that Nature and science have enriched them with, and many a new lucrative industry has been created, and is flourishing, that would never have existed but for this wonderful electric energy.

The power-producing potential of the mighty Niagara is also being tapped; a large conduit has been constructed near the falls, through which enormous volumes of water swiftly flow, and drive

immense power-producing turbines having a total power-output of 100,000 horse-power.

The enormous power that can be drawn upon for transmission purposes from the Niagara Falls will be understood when it is known that the weight of water that passes over these falls is equivalent to the production of 7,000,000 horse-power per hour; so that by electrical transmission a great part of this power required for the industries of North America could be supplied from the falls.

One of the most interesting examples of electric transmission of power is that of Tivoli, near Rome; here the antique and modern engineer join hands.

The water delivered from the old Roman aqueducts at Tivoii drives very powerful turbines and an electric generating plant, and the energy generated is transmitted by four copper cables to the city of Rome, some nineteen miles away, where it is distributed for lighting and power purposes—the water brought by those triumphs of Roman engineering thus serving as a means of lighting the superb monuments of the genius of the old Roman artist-architects.

On the Transvaal, South Africa, electric-power distribution projects are either in hand or under consideration for driving gold-mining machinery with the power of waterfalls, miles away from the modern El Dorado, on the Banket gold-mining fields of the Randt.

Projects are being developed for utilising the waterfalls of Finland for supplying electric power and light energy for the Russian capital.

Almost everywhere natural sources of power are being drawn upon, and already new industrial concerns are being established to take up the power from the Niagara turbines. It is intended in the near future to transmit the bulk of the power to the centres of industry in the Northern States of America.

When the natural forces of gravity are being drawn upon by our industrial rivals, the pertinent question for us is, Do we in England utilise our own natural resources in a manner such as to command the satisfaction of the progressive engineer? And again, Do we utilise to the full the advantages that electrical phenomena have revealed to us? To both these questions only one answer can truly be given, and that answer is a negative one.

With the exception of the splendid improvement introduced by the illustrious American, George Corliss, there cannot be said to have been any great revolution in the methods of converting heat into work through the medium of steam; but a brilliant innovation has been brought into the commercial field by the German practical scientist's (the late Dr. Otto) invention, by which, and without the intervention of steam, but by the direct combustion of fuel in the engine cylinder itself, heat is directly converted into work. This

invention for small powers has had a wide application in recent years; nevertheless, in all our great industrial occupations the practical power-agency employed is still the steam-engine, and the coal has to be brought to our mills and works from coalpits miles away, by the agencies of cart and railway waggon; and the blackened and dirty, not to say filthy, condition of the buildings and streets of our towns, and the insult to Nature by the pollution of our rivers, and of the atmosphere with dirty and wasteful industrial effluents, might well increase and bring in the hatred of the lover of art and Nature, such as is John Ruskin, against the development of the application of practical science for the convenience and well-being of civilised humanity.

Our cities are almost unfit to reside in, and the natural life of the Zulu, or the simple life of the Italian peasant, is much to be preferred to that of the English workman, with his daily grinding labour amidst the dirty surroundings of our smoke-begrimed industrial centres.

If wealth requires that the beauties of Nature should be sullied by the production of effluents that offend all natural laws, better by far that we should have poverty, but with the great wealth of natural purity.

Fortunately, the discovery of the reversibility of the electric-generating machine, and the possibility of electric transmission of power under very high pressures, has enabled such a complete transformation to be effected in engineering procedure as to deserve the encomiums of Ruskin himself.

With the modern and more scientific method of converting heat into work there is no necessity for the smoky factory chimney, which is a necessary evil of a steam-power station.

By the adoption of the new procedure with the electric agent the noise, dirt, and danger inseparable from our present steam-raising and power plants would disappear, and the present methods of power-production would only be remembered as sources of worry and expense to the already harassed manufacturer.

Our large cities of Liverpool, Manchester, and Glasgow obtain their water for domestic and industrial purposes from inland lakes miles away.

We have, therefore, splendid municipal criterions for the project of distributing electric energy from the coal-fields, a system that would sweep away at once all the disgrace that attaches to the existing methods of steam-power production, and which would be a benefit that would be truly national, covering, as it would do, both the manufacturer and the private citizen.

Briefly described, the project is to supply electric power generated in central stations built in the centres of our coal-fields to our great industrial centres, and to the metropolis itself.

The power station for serving the metropolis would be erected on the

Derbyshire coal-field; an auxiliary station to serve the Midland Counties would be erected in the Staffordshire coal-field.

The electrical trunk-lines would serve the larger towns *en route*, including Derby, Nottingham, Birmingham, Leicester, Northampton, and Bedford. Distributing, transforming, and storage stations could be erected near the metropolis.

The different metropolitan and suburban electric-light stations could be supplied with energy for general distribution. Electric railways and other power stations could also be supplied.

Larger power consumers could be supplied with power direct.

Each vestry not already supplied with an electric-generating plant could be invited to put down a distributing system and a receiving station.

The electric energy could be sold to the different distributing companies at such a price as to enable the power to be supplied to the light and power consumer at an economic and attractive figure, or at a little over one penny per kilowatt hour.

The industrial centres of Lancashire, Yorkshire, and Cheshire would be supplied with electric energy generated in two coal-field stations, respectively near Wigan and Barnsley.

The cost of power to the small factory owner need not exceed 5*l*. per 3,000 working hours of one actual horse-power of energy. In the metropolis, this energy by the present system will cost between 9*l*. and 12*l*.

This electrical power agency permits the starting or stopping of the plant by the mere turning of a switch or the pressure of a button.

Whilst the power plant is not actually doing work there is neither serious loss nor anxiety involved. The power user is not troubled with boiler insurance or the smoke-nuisance inspector; he may simply hire the electric motors, and when he decides to remove his manufacturing appliances, he has merely to return the hired motors; whereas a steam-power plant with its chimney cannot, except with a great sacrifice, be removed.

If the system is carried out entirely, each machine can be driven independently by its own motor; consequently, the expensive items of belting, shafting, and pulleys are almost entirely reduced.

Instead of having to run a 100 horse-power engine to develop 20 horse-power, which is with steam-power an hourly possibility, with electric driving only the power required is produced, and the factory owner, or the power user, only pays for the actual power he absorbs in his work.

The centralisation of the plant in the coal-fields permits the recovery of all the valuable chemical constituents from the coal, which are not recoverable by the small steam-power systems in use. One of these constituents, sulphate of ammonia, is of proved value as a manurial agent, and if this value were recovered from the

coal raised from English pits, there would be no necessity to ransack the fields of Chili and Peru for nitrates.

The centralisation of power-production would permit such an application of automatic or labour-saving machinery as to make the plant independent of the effects following the differences that occur between Capital and Labour.

The method of transforming the fuel into power could be effected in such a perfect manner as to convert, as far as practicable, all the available heat into work, and produce such an efficiency as will be understood by the ratio of 0·75 lb. of combustible to one actual or available horse-power of energy for the period of one hour.

The average consumption by existing steam-plants cannot be taken as less than 5 lb. of fuel for the same actual power during the same time.

In the transmission of this electric energy to the Midlands and the metropolis there will be a loss of, say, 33 per cent.; so that the 0·75 lb. will be increased to 1 lb. of combustible per actual horse-power per hour.

Compared with the transmission of the coal by cart and rail to satisfy the same power-requirements in the metropolis, it will be realised that the equivalent of one ton of transmitted electrical power delivered in London is equal to three tons of rail-transmitted steam-coal power; so that the relative cost of the two powers is, by the weight test, clearly in favour of the electrical power.

Further comparing in other respects the two systems of power transmission—the railway and the electric cable one—the permanent way of railways requires constant renewal, whereas the electric copper cable will be as good in twenty-five years as when first established. The recent variation in the value of copper, of which the cables would be formed, has not been very serious, and there is every reason to believe that the value of copper will be an ascending one.

As an investment, copper laid down as cables for transmitting energy-power from the coal-fields is as safe as if the copper were in the Bank of England.

Therefore the cost of aying down the cables, *per se*, should be covered by the issue of separate debenture shares at a little above the average bank rate of interest.

In the transmission of coal by rail the same coal waggons have to return the entire distance empty, because coal waggons are not suitable for any other kind of goods traffic.

The wear and tear of coal-carrying railway stock is very great, and with the comparatively low rates charged for this traffic, considering its wear on the permanent way, it is questionable whether it is a desirable traffic for railway companies to have.

By the time the steam-coal, costing, say, 4*s.* 6*d.* at the pit mouth, reaches the London terminus its cost has been increased to from 10*s.*

to 11*s.*; the merchant's profits, coupled to the carting charges, brings the cost to 13*s.* at the factory or other consumer's stores.

Analysis shows that most coals contain from 5 to 10 per cent. of incombustible residuum, known as ash and clinker; it follows, therefore, that for every 1,000,000 tons of coal brought to London, from 50,000 to 100,000 tons of incombustible matter is carried.

This waste of carrying power, as well as the waste of coal in transit, will by electric transmission be entirely avoided.

The cost of the electric transmission cable and wayleaves, divided, as it would be, with the Midland consumers, would not fall heavily in the metropolitan area.

The trunk-cables would be either suspended from poles *à la* telegraph, or be placed in underground trenches or conduits; there would be little, if any, greater difficulty in fixing up the power-lines than with the telegraph or telephone ones.

For the transmission of 10,000 horse-power three bare conductors for positive, and three for negative, currents would be used, equipped with oil insulators.

Lightning-arresters would be arranged where the cables are overhead.

The pressure of the current (30,000 volts) would be transformed down to 2,000 volts at the Midland and metropolitan receiving stations, for the convenience of the local metropolitan companies, who can transform the pressure at their own stations down to their normal working and distributing one.

The distribution of the electric energy to the various Greater London electric-supply companies, at a price of 2¼*d.* per kilowatt or electrical horse-power, would permit them to sell the current to their consumers for 3*d.* to 4*d.* per kilowatt, instead of 7*d.* to 8*d.* charged by the Metropolitan Company for this equivalent of energy.

It would be impossible in the limits of this article to define with any degree of completeness all the benefits that would follow the application of that transcendent gift to man involved in the possibility of the long-distance electric transmission of energy that recent science and discovery have unearthed from Nature's secret stores.

The developments that have followed the invention of that imperfect instrument for converting heat into work by the agency of steam—the steam-engine—have been of untold advantage to the human race, but the application of modern practical thermodynamics and electro-technics is destined to produce a still greater change and amelioration in the conditions of commercial, industrial, and home life.

Electrical energy is almost daily being applied to new directions, and with almost marvellous results; so that, besides providing the *primum mobile* to our industrial ateliers, and providing a hygienically perfect illuminant, it gives the manufacturer the

power of welding and annealing bars without a forge furnace, and enables him to melt both steel, iron, copper, and brass rapidly and conveniently.

He can produce aluminium, chlorine, caustic soda; effect bleaching and tanning by electrolysis; and by the phenomenon of varying electrical resistance of different conductors he can effect cooking, evaporating, and heating operations.

To the florist it offers a means of accelerating floral growth.

The energy can be utilised for ventilation, for actuating knife-cleaning, sewing, and laundry machinery.

The electric energy generated in the coal-field stations, and transmitted to the industrial centres of England and to the metropolis, would enable the magic influence to be distributed to consumers at a price within the reach of rich and poor alike—a benefit for all and everyone.

B. H. THWAITE,
Civil Engineer.

NEW SOURCES OF ELECTRIC POWER

II

ELECTRICITY FROM PEAT

THE Irish Question is for the moment in the background, but the Highland Question is coming again to the front, and Lord Rosebery, speaking at Inverness last September, when opening a bazaar for the encouragement of native industries, declared the intention of the Government to deal with it next Session. In this article I do not propose to consider the political aspects of the question, but to indicate a possible way of helping the Highlands, and also Ireland, by means of private enterprise.

It is plain even to a passing tourist that much of the discontent in the Highlands and West of Ireland is, at bottom, due to the character of the country. As he surveys the desolate moors and mountains, with their crags and waterfalls, he may well ask himself: In a civilised age, what can be done with a land so devoid of natural resources, of raw materials? According to the popular creed, 'whisky, herrings, and crofters' are the principal productions of the Highlands. To these may be added slate and paving-stone, timber, good air, wild scenery, and game attractive to visitors, and also sheep and wool-work. There is another product not unworthy of mention, one we are too apt to forget, although it is the best that any soil can produce, and that is—men. It must be owned that the Highlanders are a fine breed of men. Everything goes to prove that, mentally and physically, they are amongst the ablest men in the Empire. There are persons, the victims of their own ignorance and prejudice, who affect to sneer at them as an inferior race; but neither personal acquaintance with the Highlanders, nor the lessons of history, nor the results of anthropology, will bear them out. Politicians, to serve their own ends and bias the electorate, endeavour to stir up the dying embers of racial spite by calling them 'Celts' and 'foreigners,' akin to the French, and the natural enemy of the 'Anglo-Saxons'; although it has been perfectly well known to anthropologists for many years that the Highlanders are not Celts at all, except in name, but a mixed people, practically the same as the Lowland Scotch, and similar to the rest of the nation both in blood and origin. By actual

measurement of their bodily strength, and by their conspicuous success at home and abroad in every walk of life, civil, political, and military, they appear as the most vigorous branch of the whole British race. Evidently the future belongs to the Highlanders. At the very least they will fight our battles and reinvigorate our more exhausted stock. Yet there are statesmen who can find no better remedy for the Highland trouble than to ship them out of the country. We are asked to raise money to export the flower of the nation, and at the same time we import all manner of destitute and diseased aliens. What should we say of a man who drained away his best blood and supplied its place with bad? In plain English, we should call him a madman.

We cannot spare the Highlanders, and something should be done to keep them in the country. Can we not employ electricity, which has changed the prospects of so many places, to the advantage of the Highlands? The fishermen of Loch Fyne are trying to get a light railway from Strachur to Kilmun, in order to place their delicious fish on the Glasgow market on the morning, and the London market in the evening, of the day on which they are caught, and all who have tasted a genuine fresh Loch Fyne herring will devoutly wish them every success; but they must wait until the Government assist them. Here, then, is a case in which electricity might play a part, for there is water power in the neighbourhood to drive the trains. Some time ago I was talking of this very matter with Professor George Forbes, F.R.S., the distinguished consulting electrician to the Cataract Construction Company of Niagara, and perhaps the highest living authority on the transmission of power by electricity, and he asserted that he would undertake to run all the railways of Scotland by means of the water power which is now running to waste. Apart from the railways, some of the electric power might be applied to industrial purposes if there were raw material on the spot.

There is, however, another source of prosperity in the Highlands and Ireland which has been too much neglected—namely, peat. In peat we have at once a fuel and a raw material, and what I desire to point out is that, by burning it in engines, we can obtain not only the power required to manufacture the raw peat, but also a supply of electricity for distribution.

Peat, as many people know, is altered vegetable matter, consisting largely of bog mosses and hill grasses. It is formed in old lake-beds, mountain tarns, marshes, and fallen forests. Of recent origin, its growth is comparatively rapid. Dug-out canoes, weapons of the Bronze Age, even Roman coins and roads, are found beneath it. The peat-moss of Kincardine flourishes on the site of an old oak forest, which has been felled by hand, for the marks of the axe can be seen on the stumps eight feet below the surface. In the seventeenth century a storm on Loch Broom, in Ross-shire, levelled a forest, and

in less than fifty years afterwards peat was dug on the site. Peat-beds sometimes yield bog-oak and bog-iron ore, both of which are valuable, and the peat itself, when analysed, gives about 60 per cent. of carbon, 33 per cent. of oxygen, 6 per cent. of hydrogen, and 1 per cent. of nitrogen. The amount of ash varies with the purity of the peat from below 1 per cent. to over 60 per cent., and consists of sand, clay, oxide of iron, and sulphuric acid, with traces of lime, soda, potash, and magnesia.

The peat-beds of the United Kingdom are both numerous and rich; but, strange to tell, they have not even been surveyed, and we can only form a rough estimate of their extent. According to Mr. P. F. Nursey, Ex-president of the Society of Engineers, there are no fewer than six million acres of peat in the country, having an average depth of 12 feet, and capable of yielding 3,500 tons per acre of dried peat, or twenty-one billion tons in all.

In England, one of the most notable accumulations is the Chat Moss, near Liverpool; in Scotland there are many of all sizes, but the Moor of Rannoch, celebrated in Mr. Stevenson's *Kidnapped*, is perhaps the largest; and in Ireland the best known is the great Bog of Allen, which is said to comprise 238,500 acres of peat, having an average depth of 25 feet. The total extent of peat in Ireland is cast at 2,830,000 acres, or nearly one-seventh of the whole area of the island, and of this 1,570,000 acres are of the best 'red peat.' As the value of raw peat is to that of coal as about 1 to 6, the total amount of peat fuel in Ireland is equivalent to 470,000,000 tons of coal, which at 12*s.* a ton represents 280,000,000*l.* sterling.

There is also much peat on the Continent, and it was probably with a view of helping Ireland through her peat-beds that the Government of Lord Salisbury in 1892 issued a circular to her Majesty's representatives at Paris, the Hague, Copenhagen, Stockholm, St. Petersburg, and Berlin, asking for information as to the peat industries in the northern countries. The immediate result of the inquiry was a series of valuable reports, published in 1893, which may be studied by all who are interested in the utilisation of peat. They show that Germany, Holland, and Scandinavia, in particular, are making the most of their peat supplies, therein affording us an example which we might do well to follow.

The turf-moors or *Torf-moore* of Germany occur chiefly in Prussia, and belong to the Government. They are worked either by the Forestry Department or leased to tenants, who are required to prepare the underlying soil for cultivation. The peat is cut and dried in the open air during the summer, then sold as fuel, or made into 'litter' for bedding cattle, or turf-mould (*Torf-mull*) for disinfecting purposes. The fibres are also woven into a coarse cloth, or ground into paper-pulp. Moreover, the peat is distilled into coke and charcoal, and a variety of chemical products in general use.

The fuel is consumed in the locality for heating brick-kilns, baking-ovens, and so on, as the cost of freight forbids it to compete with coal at a distance; but a great part of the litter is exported, even as far as America; and, incredible as it may appear, 1,200 tons a year, or one-fourth of the entire output of Oldenburg, is actually sent to Great Britain and Ireland, where we have so much unused peat of our own.

In Friesland and other parts of Holland the 'black turf' is made into fuel for brick-kilns, litter for stables, and mould for mixing with sewage. Some of it is exported to Bremen, Brunswick, and Belgium, and it is stated that 280,000 tons of the fuel, worth 133,000*l*., are annually consumed throughout the Netherlands. The Dutch canals facilitate the transport of the peat, and, as the subsoil of the moors is always cultivated after the peat is lifted, the barges that take away the peat bring back manure for the ground. At Gröningen, for instance, all the sewage of the city is applied to the reclamation of the surrounding turf-moors. In Denmark, where there is no great supply of peat, it is chiefly used by the peasants as fuel, or as bedding in the dairy farms. In Sweden, on the contrary, there are bogs extending for hundreds of square miles, and of late years over 600,000 acres of the moorland have been brought under the plough. The peat is prepared as fuel, and largely consumed in making iron, glass, or brick, either alone or mixed with coal and fir-cones. In southern Sweden there are factories solely engaged in manufacturing peat-fuel for sale, as its use is steadily increasing, and some 30,000 tons a year are employed in metallurgical operations. In southern and central Sweden there are some twenty factories for preparing peat litter and mould, each factory turning out from 15,000 to 30,000 bales a year, fetching about 2*s*. a piece. The mould is used for gardening in Sweden, while stuffing for mattresses or furniture, and surgical bandages are made from the white moss of the moors. In France the peat is moulded into 'briquettes' with tar and resin, teased into litter, or woven into fabrics which are used in the army, its barracks and hospitals, as blankets, mattresses, and saddlecloths, or for stuffing coffer dams and certain parts of machinery.

According to Mr. Nursey, peat-fuel, made by removing the fibres and condensing it, is not more expensive than coal at the pit mouth. It burns freely in the furnace, requiring little draught, and yields more gas and heat than coal, thus enabling steam to be got up sooner and more work to be done. It is free from the nuisance of sparks, and clinkers, sulphur, and soot, and the smoke is rather healthy and agreeable than otherwise, it being esteemed a remedy for consumption. Lampblack, tar, and aniline dyes, naphtha, paraffin, and other hydrocarbons, lighting and lubricating oils, illuminating gas, which is apparently the coming fuel, alcohol, vinegar, salts of ammonia, acetate of lime, and soda are also among the products of distillation.

Peat-litter is a more sanitary and comfortable bedding for animals than straw, and makes a better manure. Peat dust or mould is an excellent deodoriser and absorbent, which is employed in earth-closets, slaughter-houses, sugar factories, and elsewhere. It is also good for packing fish, fruit, and other perishable freight, and, being a non-conductor of heat, for lining the walls of rooms and ice-cellars. Peat-fibre is made into celluloid, roofing, and matchwood, as well as carpets, cloth, and paper-pulp.

In southern Bavaria peat-fuel is burnt in locomotives, and would evidently suit our underground lines. Tried on a river steamboat by Mr. B. Fothergill, it was found to last twice longer than coal and give the same speed. Briquettes made with tar and coal-dust or resin are coming into favour for household use even in England, thanks to the Peat Fuel Company of London, and they will burn in any furnace for coal or wood. Peat coke and charcoal, which fetch as much as wood charcoal, are in request for smelting, puddling, and forging iron, as they are free from sulphur, which makes it brittle, and also for smelting lead, blowing glass, making gunpowder or fire-works, and other chemical purposes. Bitumen got by distilling the peat is also utilised in paving streets.

A fuel as well as a raw material, peat can supply the power required to coke, distil, and manufacture itself. For convenience and economy the associated industries ought to be carried on at the peat-beds, which should be connected by rail or water with the best markets. We are now witnessing the rise of a new industrial city at Niagara, in which the machinery will be driven by electric power derived from the Falls, and we may yet see the Bog of Allen or the Moor of Rannoch supporting settlements and factories for the utilisation of peat. The soil reclaimed by the removal of the peat could be brought under cultivation with fertilisers made from the peat, or the sewage of towns—for example, the muck now dredged from the Clyde and flung into the sea. It is also a question for horticulturists whether fruit and vegetables could not be forced under glass on a large scale with the help of peat-fuel, peat-mould, and the electric light in thick weather, after the manner of the late Sir William Siemens. Moreover, just as in the case of Niagara, where electric power is to be sent by wire to the city of Buffalo, so in the Highlands and Ireland it could be distributed to work railways, and to the nearest towns or villages; and Oban, Inverness, or even Glasgow, might derive both light and energy from what is now the dark, inert, and dismal Moor of Rannoch.

J. MUNRO.

THE DECAY OF BOOKSELLING

By way of preface, let me at once lay claim to the pre-eminence of bookselling among the trades of this country. I will yield to no one in formulating this statement. Indeed, if I were writing forty years ago instead of to-day, I would place bookselling among the professions. But alas! we have fallen on evil days, and, with a few honourable exceptions, booksellers at the present hour can only be regarded as 'dealers' in books. It was not always so, and those whose memories can hark back will recall booksellers who were indeed guides, philosophers, and friends. They were men whose advice was sought and whose opinions were obtained as to the value of a book before purchasing. Now it is quite the other way, and it is often the book-buyer who is able to indicate the sterling value of his purchase, while the bookseller remains mute and ignorant.

It is very hard to write such things, but unfortunately it cannot be gainsaid that when one considers for a moment, to a man with any pretences to a literary taste, bookselling is one of the most delightful occupations in which he can be engaged. The custodian of a large library, who has his heart and soul in his work, possesses a great delight in being the distributor of literature to those who merely desire to have the use of a book; but when to this is added the increased pleasure which a bookseller receives in effecting sales of the works at his disposal, a commercial zest is given to his work which is not known in any other business. He feels that, while he is benefiting himself, he is also doing some good in the world, by helping to build up a private library for his customer which will be a joy to him for the rest of his life.

This is no fancy picture, and I believe I am merely echoing the sentiments of many living booksellers who revel in their business, while only receiving a meagre return for all their outlay of thought and consideration in handling their stock. Unfortunately this is not the feeling of the great bulk of the booksellers of to-day, who only care to sell books on which there is a considerable margin of profit, without regard to any ulterior object. The old-fashioned class of bookseller is rapidly disappearing, owing to the system of excessive discount-giving and other causes, which are threatening the existence

of the entire trade. A bookseller cannot now obtain a reasonable profit on the better class of books, which he would prefer placing on his shelves, and he becomes heartless and despondent. Instead of being the possessor of a stock of books which would redound to his credit, he gradually allows it to disappear from his shelves, as it finds tardy customers, and then either quits the business in despair, or fills his shelves with stationery and other articles which yield a more remunerative return.

The books to be found on the shelves of the greater part of provincial shops consist mainly of the reprints of non-copyright books which can be bought in quantities at a cheap rate, and the booksellers in whose shops this class of book predominates know nothing whatever of the publications of Blackwood, Longmans, or Murray, and other publishers of like standing; and, truth to tell, they could not exist on the sales of the better class of works, even if they did place them in their stock, so small is the margin of profit in these days of discount. In fact, the genuine country bookseller has ceased to exist, and he is compelled to eke out his livelihood by becoming a general dealer in all kinds of knick-knacks. I do not blame him, and, before he utterly disappears, we must look around and endeavour to find a remedy for this state of things.

Closely allied with 'The Decay of Literature'[1] is 'The Decay of Bookselling,' and it becomes worth while considering the cause of all this decay, and endeavouring to discover how it can be remedied.

As a nation, we glory in our literature and in our literary men; but if all the outlets for the dissemination of literature are to be closed, we have a very sorry outlook. If the time is coming when there are to be no booksellers' shops in the country, when all the 'sweetness and light' is to be effaced out of our provincial towns, we shall have come to a bad pass indeed. Is the intelligent bookseller to disappear from our midst, and his place to be occupied by a trader who is merely a middleman? The prospect seems so serious, and the outlook so disquieting, that there is no time to be lost in discussing the problem.

It will hardly be credited that, in spite of the enormous growth of the population of the metropolis, only four new bookselling businesses have sprung into existence within the last twenty years, while during the same space of time nine or ten booksellers have totally disappeared.

In the provinces there is the same story to tell. Booksellers' shops which have been a credit to a town have vanished into thin air, and no new-comers have arrived to take their place. Towns which I visited thirty years ago on business journeys do not now contain a bookseller worthy of the name, and publishers tell me that they are

[1] *The Nineteenth Century*, March 1894.

gradually contracting the circuits of their travellers' visits, because the amount of the orders they receive in many towns is not sufficient to defray expenses. The booksellers' of yesterday are the fancy shops of to-day. Books are now huddled up with china jars and bric-à-brac, much to the detriment of the former; and even they are of the most ordinary type, and not such as would reflect credit on any 'gentleman's library.' Go into any country town you choose, and in place of finding in a bookseller's shop the standard works in which our fathers delighted, you can only lay hands on the flimsiest trash of the hour and cheap editions of non-copyright books. Very probably the bookseller himself deplores this state of things, and he tells you he must live, as the profit on the sale of the best books, as I have already said, will not afford him a living. It is not the bookseller's fault that such should be the case, for has he not struggled for years in his efforts to close his eyes to the diminished profits resulting from the excessive discount which (through no seeking on his part) he is compelled to allow?

In the present state of affairs a bookseller would rather not receive an order for a good book, which only yields him ten per cent. profit, while his business expenses are twelve or thirteen per cent. It is more remunerative to sell one non-copyright book than to receive orders for six that are copyright which yield him but a fraction of profit. Efforts have been made over and over again to induce the publishers of high-class publications to allow a greater discount to the trade under the present conditions of business, but without effect. The publishers, no doubt, have good grounds for withholding greater allowances, but it seems to me that in too many cases the publishers do not desire to look too closely into what concerns the retail trade. They, too, have their troubles and anxieties at the present juncture, but I fervently hope that they are maturing some plans to surmount the present *impasse*.

There is no doubt that the great cause of the decay in bookselling is the excessive discount which is allowed. Many books are supplied by the publishers at such prices as to enable the bookseller to allow the too liberal discount which is now deducted from the advertised price, but this only holds good on the cheaper and non-copyright books, which can be disposed of in large quantities. On the better class of publications the terms to the bookseller, as I have already indicated, being of such an illiberal character, business is frequently done on so narrow a margin as almost to constitute a loss. Probably this is caused by no ill-will on the part of the publisher, but simply because he cannot print and dispose of large editions of his expensive books. How this is to be remedied we shall see later on.

The bookseller, on his part, cannot make any distinction in his rate of charges to the public, as they fail to understand why one book should be debited to them on one scale, and another on a different

scale, and hence it comes that the bookseller is compelled to range his prices in line quite irrespective of profit to himself. It is no use arguing that the bookseller is a fool for his pains, as the public will not grasp the fact that there should be a sliding scale in the price of books.

Another great cause of the diminution in the sale of books and contraction of the bookseller's business is the enormous increase of periodical literature. Since 1860, when the monthly magazines came in with a rush which has increased in force ever since, they have steadily supplanted the place of the book in every domestic circle. No one at that time foresaw the important part the monthly magazines were to play with the general reader; and now, what with weekly reviews, and even daily reviews, it is difficult to see when the old-fashioned reader has time to look at a book.

The morning paper engrosses the first part of his day, and glancing at the numerous evening papers consumes a considerable part of his evening leisure; so that when he takes up a book of four or five hundred pages, the sight of so much solid reading depresses him, and he turns to some of the monthly magazines rather than face the ordeal of beginning to read a substantial volume.

I have no wish to decry magazine-reading, much of which is delightful, but rather to show that the reading of it is all against a man laying in a store of books for his delectation.

It is a well-known experience of booksellers that the reading-man is not always his best client—it is the man who buys books from a sheer love of possessing and accumulating them; and if every purchaser were to read the books that he buys, even the best bookseller could not make a living. So that, with all the deterrents to book-buying which are caused by the multiplicity of periodical literature, we have still one class of customers to maintain us in good spirits.

Neither do I desire to say an unkind word against the extension of free libraries as a hindrance to book-buying, but rather wish to believe—although it is a bit of optimism—that their influence is beneficial in fostering a taste for the acquisition of books. Some time ago, while reading a paper before the Library Association, and expressing my views in favour of free libraries, I ventured to say that wherever a free library was started, there would I expect to see two or three booksellers' shops spring into being; but my dream has not been realised. Booksellers are too heavily handicapped to exhibit enterprise of this sort; but, all the same, I shall never cease to hope that my expectations in this direction may yet come to pass. There is no concealing the fact that booksellers do not appreciate free libraries, except as a means of obtaining large orders for the supply of the library; but even in this respect it is a bad day's work for a bookseller when his estimate is accepted, as the estimate prices are cut to so low a figure, owing to ridiculous competition, that his profit on the

transaction is quite infinitesimal. He may dispose of a considerable number of books in this way, but *le jeu n'en vaut pas la chandelle.*

At the present moment it is a burning question among booksellers in regard to estimating for free libraries. The orders for books ought really to be allocated among the local booksellers, who might find them worth executing; but in nine cases out of ten the order is given to some distant cutting bookseller, who undertakes to supply the books at a price which makes the local man stare in amazement.

It is therefore not surprising that many booksellers look upon the free libraries with undisguised dislike. I am hopeful, however, that the action which is now being taken in a certain quarter may result in some better arrangement, and so gain over the good-feeling of the bookseller, who ought really to be able to look on the free library as his best ally.

Now as to the remedy. I have glanced at all the various causes of depression at present existing in the trade, and trust I have been able to show that, unless there is a turn of the tide, the business of bookselling is likely to become a lost art. Numberless remedies have been suggested by many members of the trade through our usual channels, especially by those who have its true interest at heart, and who desire to retain their position in it. It has been suggested by some that the publisher should issue a mandate compelling all their books to be sold at the price at which they are advertised; by others, again, that there should be no published price, but that each bookseller should make his prices in accord with the expenses of his business and the amount of his turnover. The result of that would be that a certain book in one town would be five shillings, in another six shillings, and in another six shillings and sixpence, according to the idea of essential profit required by each bookseller. It is urged that this practice is carried out in many trades, but it seems impracticable with books. A yard of cloth or a piece of furniture may command different prices in different towns, but such a thing could not be done with books. The publisher is compelled to determine a selling price, in order that he may publicly announce its appearance, as it is an article which is sold and distributed all over the world. His position would really be a helpless one if he could not affix a pecuniary value to his production, so we may at once dismiss this suggestion as impracticable and visionary.

In seeking for further remedies, we at once encounter the great stumbling-block to the popularisation of our literature, in the very high prices at which books of travel, biography, and belles-lettres are issued by the publishers. When we find books which ought to be popular issued at prices which are far beyond the means of the great proportion of book-buyers, we at once perceive why they are

not found in every bookseller's shop. They are chiefly intended for the limited few, or the circulating libraries. It is very rarely that a publisher looks for orders from the second rank of booksellers for these books, as he has no thoughts of catering for them. By this procedure he cuts himself off from the great bulk of the trade, and that he does this with *malice prepense* is only too evident by the illiberal nature of his conditions of publication.

In his vindication for the high selling price of these books to which I refer, the publisher points to the cost of production and the superior scale of literary payment which he has to make. But I would retort, Is it necessary, as a reason for charging a high selling price for a book, that it should be printed in excessively large type, on very thick paper, and with a gorgeous exterior? If we look to our neighbours across the Channel, we find a book issued at 7*f.* 50*c.* which in this country would be published at thirty shillings. I cannot altogether praise the get-up of many French books; but if we examine the publications of Firmin Didot and other Paris houses, it will be found that their books are produced in quite good enough style (minus the binding) for the ordinary reader, and at a price which is within the reach of all; and the publisher reaps his reward in the sale of thousands of copies, while with our books we are barely able to scramble through the sale of one edition. The traditions of English publishing are evidently against the moderate-priced book; when an English translation of a 7*f.* 50*c.* appears, the price becomes thirty or thirty-six shillings in place of seven shillings and sixpence, at which price booksellers would take heart of grace, and place the book in stock and use their best efforts to sell it, whereas at the former price they can only look at the book from a distance.

If I sought for an argument in favour of books being issued at moderate prices, I would point to the great success which has recently attended the issue of new novels at a selling price of 6*s.*, in place of 31*s.* 6*d.* The sale of many of these books has been enormous, some 20,000, others 10,000, copies in place of a limited edition of 1,000 copies in the three-volume form. Within the last three months the publication of these books has given quite an impetus to business. To many booksellers (and to publishers as well, I hope) it has been a magnificent object-lesson, showing that a good book at a moderate price has great possibilities. Surely if novels can be published at popular prices, why not the better class of literature? A new class of book-buyers would come into existence, who previously only thought of taking a hurried glance at them through the medium of a circulating library. Renewed encouragement should accrue to both publisher and bookseller.

Having proceeded thus far, I would now approach the remedy which is believed by most booksellers to secure the salvation of their trade, and that is the adoption of net prices. The movement in this

direction, which was inaugurated by Messrs. Macmillan, and has since been adopted on a considerable number of their publications by other leading publishers, is fast making great strides, and bids fair to become popular with publishers, booksellers, and the public.

There has hardly been a dissentient voice of any importance raised against it among the trade, and its general adoption seems very imminent. To the publisher the net system holds out great advantages. When he publishes a book he can foresee the precise sum he will receive on the sale of an edition, whereas with a fluctuating scale of prices to the trade he never can tell how much has been received as a result of the sale until the edition is cleared off. It also enables him to make an honest selling price, and not a fictitious one. This is not the place to enter into details as to the mode in which books are sold to the trade, so I will content myself by stating that the largest buyer receives the most advantages, to the detriment of the smaller. With the net system all this is changed, and all are equal.

To the public, at first sight, the merits of the new system may not be so obvious, but as time goes on the advantages will become more apparent. I shall, however, illustrate. If a book that was formerly published at 16*s.*, and is in the greater part of booksellers' shops sold at 12*s.*, becomes under the net system 10*s.* net, the gain to the book-buyer will certainly be a solid one. I shall be at once told that the book-buyer who pays cash and his neighbour who takes credit are on a level. To that I would say that the days of credit have long passed away in our business. The lengthened credit to which our fathers were accustomed has become a thing of the past, and the cash system has become universal.

The question naturally arises, 'How far should the net system be adopted?' My own opinion is that it should be applied to every copyright book. The non-copyright books can be left to take care of themselves, and confided to the tender mercies of the free-lances in the publishing trade who fight for the honour of issuing them.

If I have been able by this article to indicate in my imperfect way the permanent benefit of the net system, I shall be gratified indeed, and shall look forward to brighter days for the booksellers.

DAVID STOTT.

WANTED, AN IMPERIAL CONFERENCE

THE Conference at Ottawa, though not exactly an epoch-making event, marks the rapid progress of colonial political development, and illustrates the watch and wait policy of the mother-country in all matters mutually concerning her interests and those of the self-governing colonies. That those colonies should spontaneously resolve to hold such a conference indicates their desire for closer touch with each other. The Colonial Office, which is a vast colonial intelligence department, must have been either quite ignorant of that fact, or purposely and conveniently blind to it. It cannot be assumed the colonies deliberately desired to act entirely independently of the mother-country, and planned to leave her outside their pursuit of closer union, for such idea is distinctly contrary to the declarations of the official delegates of the colonies at the Conference and elsewhere. They each and all proclaimed that the object of the Conference was to strengthen the Empire. The fact, however, remains that in the inception of the Conference the mother-country had no share, that the terms of reference to the Conference were not drawn by the mother-country's Government, and that it was not till all was arranged, and delegates from colonies in all quarters of the world were *en route* to Ottawa, that it was officially announced the mother-country would be represented at the Conference. The instructions to Lord Jersey—the sole representative of the United Kingdom—were, put shortly, to watch and wait, not to vote. When the constituent parts of the Empire represented at this Conference are examined by the light of figures and facts, it is abundantly clear that only 'pious opinions,' and not much else, were to be expected as a result of the deliberations at Ottawa, and doubtless the Imperial Government acted upon that view. The dramatic effect, however, of the gathering at Ottawa is striking. No British subject out of Bedlam can fail to see the immense practical value of the impetus thus given to the *sentiment* of a United Empire. The credit of this picturesque incentive to closer union belongs not to the Imperial authority, but to colonial governments, and especially to that of Canada. Sentiment, like steam, is a great force. Both are useless, and may be dangerous, without the carefully constructed machinery necessary to give practical use and effect to their accumulated power.

The Conference at Ottawa expressed the active existence of Imperial sentiment, while exhibiting to the world the one great defect of the British Empire of to-day—the absence of Imperial machinery to give real and practical effect to Imperial sentiment. Because there is none the Imperial authority did nothing before or at the Conference but watch and wait; and it is because there is none the colonies took independent action to combine in expressing, at a conference, such wants and wishes as they desire, in their own interests, to see satisfied. The Ottawa Conference was an extemporised piece of consultative machinery devised to bring concentrated pressure on the mother-country to do certain things, which it was hoped would strengthen the Empire, and would certainly benefit the colonies generally, and some of them—Canada, for example—directly and particularly.

One of those things was—to obtain a subsidy and guarantee from the Imperial Government for a fast steamship service, and a cable between Canada and Australia. Apparently this was the primary object which determined the action of the Government of Canada in promoting the Conference.

Now it must ever be remembered that the only funds under the control of the Imperial Government out of which such subsidies and guarantees can be supplied are those drawn from the pockets of the taxpayers of the United Kingdom. In the matter of money and taxation the term 'Imperial' only deludes. The British Empire has no 'Imperial Fund.' The 'Imperial' Government has, in a financial sense, no 'Imperial' resources at its disposal—all it can control are the pockets of the population and the property of the people of the United Kingdom. Under these circumstances, when Canada and Australasia, supported by other colonies, express the desire for subsidies or guarantees from the 'Imperial Government,' it is only a euphonious way Canadians and Australasians have of asking the Imperial authority to tax the people of these islands to pay them. In this connection it must also be borne in mind that the primary condition of the safety of every one of the colonies, of the lives and property of all British subjects—nay, the very existence of the Empire—depends upon the power of the British sea-going war fleet, and that to the support of that fleet Canada does not contribute a 'brass-farthing,' nor does British South Africa; while Australasia only gives a small contribution for a very small squadron for local protection, and which is not available for general Imperial purposes. The people and the property within the four corners of the United Kingdom bear practically the whole cost of that fleet, on which depends the safety of every man, woman, and child in the colonies. Keeping in view these broad facts, let us now examine the constituent elements represented at the Conference for purposes of estimating, by facts and figures, the true values of its practical results.

First, as regards population.

The aggregate population of the self-governing colonies is, roughly speaking, over 11,000,000, that of the United Kingdom over 38,000,000, so that for the sake of round numbers we may put 50,000,000 as the number of people represented at the Conference.

The 11,000,000 were represented by quite a number of brilliant and able delegates, and each colony with a vote, while the 38,000,000 were represented by Lord Jersey, who had no vote. Under these circumstances it is somewhat surprising to find one of the delegates (the Hon. Thomas Playford) saying that, in view of the colonies being unanimous in their recommendations, 'how could the mother-country refuse to give anything but a favourable reception to the representations made in such a manner.' The days, happily, are long past when representations from any single colony, however insignificant, if founded upon justice and equity, are received otherwise than favourably by the mother-country. Evidently, therefore, the speaker meant that the mother-country must yield to the combined pressure produced by the machinery of the Conference. On the mere basis of populations, however, that opinion ought to be put aside.

Next as regards revenue.

The aggregate annual revenue of these colonies is over 43,000,000*l.*, not far short of half the total revenue of the United Kingdom. As the colonies do not contribute to the cost of the war fleet and the portions of the army maintained for the general service of the Empire, we must, in order to make the comparisons fair, deduct the amount of the revenue of the United Kingdom appropriated to these particular services. Roughly, the amount to be so deducted is 30,000,000*l.*,[1] which leaves for purposes of true comparison the revenue of the United Kingdom at about 60,000,000*l.*

So the total British revenue represented at the Ottawa Conference as available for such subsidies and guarantees amounted to about 103,000,000*l.* The colonies, representing two-fifths of the whole, had several votes, while Lord Jersey, representing three-fifths, had none. But as British South Africa does not propose to contribute to the subsidies and guarantees in which Australasia and Canada are immediately concerned, this particular question of mail and telegraph communication between Canada and Australasia presents itself to the taxpayers of the mother-country shorn by the Conference of real Imperial importance. It becomes simply a post and telegraph departmental question in which the people of Australasia, Canada, and possibly the United Kingdom, are more or less concerned. The theory that the cable and the fast steamers to be established by subsidies and guarantees would add to the general security of the Empire in war is evidently repudiated by South

[1] Note the cost of local forces—*i.e.* militia, yeomanry, and volunteers—is not included in this figure.

Africa, for otherwise that important portion of the Empire, by abstaining from proposing to aid the undertaking, declares against adding to the general security of the Empire in war.

Now, when the representatives of the people of the United Kingdom are asked by the representatives of Canada and Australasia to grant subsidies and guarantees for fast steamers and a cable on the special ground of the general defence of the Empire, it may well be pointed out to the applicants that there is no such thing as an Imperial fund to provide for the general security of the Empire in war, that the taxable area is limited to the United Kingdom, and that the people of the United Kingdom already pay at the rate of about 16*s.*[2] per head per annum for the general defence of the Empire, while the people of Canada and Australasia do not pay one farthing for that specific purpose. The recommendations and views of the Ottawa Conference, when urged upon the Imperial Government, will afford a golden opportunity for calling an Imperial Conference to consider the means by which a real Imperial fund can be provided from the resources of the whole Empire, and the machinery by which such fund could be administered for the benefit and security of the Empire as a whole. The Hon. Mr. Suttor, delegate from New South Wales, in a speech delivered after the Conference was closed, truly observed:—'It had been said that Britain must go on or back. There was nothing for her but to go forward. He believed the old country was becoming alive to the power of the colonies, a power which he hoped would be exercised in the direction of peace and good-will towards men.' It is to be hoped this view will be taken by Imperial Ministers, and that they are really alive not merely to the power, but to the great resources of the colonies, and, recognising the force of the desire expressed by the Conference to strengthen the Empire, and draw closer the bonds between its several parts, they, in the name of Britain, will go forward by calling a conference to provide funds and machinery adequate for the requirements of the Empire, neither of which now exist. Doles from the purse of the people of the United Kingdom to the great colonies are simply expedients which are demoralising from an Imperial point of view. The time must come, and will come soon, when the people of these islands will understand how their brethren in the great colonies escape from the burden of Empire, especially as regards the naval defence of their waters and commerce. When they do understand it, they will not silently acquiesce in such a state of things any longer. The swing of the pendulum responding to the impulse of democratic forces will come with a sudden velocity that possibly may endanger the whole fabric of our loosely tied Empire. The fact that we pay for the protection of the sea-commerce of the colonies will be accentuated by the remembrance

[2] Excluding militia, yeomanry, and volunteers, which are local forces, and not available for general service by the Empire.

that they tax our goods, though we allow their goods to compete freely with ours in the home markets. The rise of taxation at home and the increase of our population, coupled with the shrinkage of free markets for our goods abroad, will all combine to produce an attitude of mind at home not favourable to the colonies. The policy of watching and waiting will then cease to be possible, and Imperial statesmen, depending for power only on the people at home, will be 'rushed,' so to speak, by a force they cannot control. Just now the masses of the United Kingdom fortunately regard the colonies with special favour and with affectionate regard. The time is most opportune for 'Britain to go forward' and lead. The mother-country and the colonies have great and vital common interests; the greatest of these is maritime security. It was the one thing which was carefully excluded from the purview of the Ottawa Conference. It is to arrange for this and to devise the means for providing it an Imperial Conference is needed.

The mercantile marine of the colonies represented at Ottawa is greater than that of France; the annual value of their sea-borne commerce, *exclusive of interchange with the mother-country*, is nearly 50 per cent. greater than that of Russia. We are now responsible for and bear the whole cost of the naval protection of these gigantic sea-interests of the colonies which were represented at Ottawa. We also are responsible for and bear the whole cost of the naval protection of the sea-commerce of our Empire of dependencies (India and the Crown colonies), which, *exclusive of interchange with the mother-country*, is in annual value equivalent to three-fourths of the annual value of the sea-commerce of the German Empire. This vast naval responsibility, ever accumulating from the development in these two divisions of the outlying Empire by the enterprise of British subjects abroad, is of course in addition to the sea-commerce of the mother-country carried on with the colonies and dependencies and all the world besides, which in annual value exceeds the aggregate sea-borne commerce of France, Russia, Germany, Italy, and Spain. Does anyone believe that our present naval means are sufficient to discharge our naval obligations? Does anyone think that adequate naval security for a world-wide Empire can be furnished by the people in one small corner of it? Those who do should at all events take note that the independent sea-commerce of the outlying Empire is very rapidly expanding, and that we are within measurable distance of the time when the sea-borne commerce of the outlying Empire will exceed that of the mother-country. Thus there is real danger in delay.

Thoughtful persons who have given serious attention to colonial policy and to the Imperial question, all acknowledge the gravity of the situation. No one denies that such means as are required to provide unquestionable sea-security for our vast Empire must be

found, and no one disputes the fact that some form of federation for maritime defence is essentially necessary for the preservation of the Empire. In order to press this view on public attention the Imperial Federation Defence Committee has been formed, consisting mostly of members of the defunct Imperial Federation League. Several members of Parliament, representing both sides of the House, belong to it. On the other hand there are those elsewhere who consider that some form of Customs Union is more important than the provision for real security in war. They loudly declare that, until a Customs Union has been created and established, the question of co-operation for maritime defence must be postponed. It cannot be denied that colonial politicians incline to the view. This is quite natural, for any form of federation for maritime defence involves giving something, and implies taking a share in a burden they now escape. It has the disadvantage of being a definite practical question. But a Customs Union presents no such obstacles to colonial politicians. It means to them the mother-country giving something more to the colonies, viz. advantages over the foreigner in her markets. It is delightfully indefinite in the possibility of accomplishment, for colonial politicians know very well that the Customs Union they want demands the actual reversal of the fiscal policy of the mother-country, viz. the abandonment, for the sake of the colonies, of free trade.

It is, however, very doubtful whether the view of colonial politicians represents what would be the view of the intelligent and common-sense colonists were the whole facts of cases for some form of federal maritime defence placed before them. The point the Defence Committee urges is, that the facts should be formally, at a conference, placed before our fellow-subjects beyond sea, and that the initiative should be taken by the Imperial Government now.

The Conference at Ottawa exhibits in an unmistakable way the present drift of colonial official opinion. Out of a series of resolutions adopted, all tending to press the mother-country to abandon the policy of free trade, it will be sufficient here to quote one:

'This Conference records its belief in the advisability of a Customs arrangement between Great Britain and her colonies, by which trade within the Empire may be placed on a more favourable footing than that which is carried on with foreign countries.'[3]

The plain English of that resolution is, that the colonies desire the mother-country to tax all foreign imports of food in order to benefit *colonial* agriculture. It is obviously a matter of indifference to farmers in Great Britain whether they are swamped in the home market by foreign or by colonial wheat. The effect on them is the same, and therefore they could not be benefited. The colonial farmers alone are to be considered.

[3] New South Wales, New Zealand, and Queensland were in a minority against the resolution.

Now it is important to understand the relative proportion of foreign trade carried on by the colonies and mother-country respectively.

The sum of import and export values of the self-governing colonies, 1892, was, in round numbers, 197,000,000*l.*, which figure, of course, includes colonial interchange with the United Kingdom. The total value of the trade of the United Kingdom in that year was 715,000,000*l.*, which also includes interchange with these colonies. Now, out of this 197,000,000*l.* of colonial trade, 157,000,000*l.* was interchange within the limits of our own Empire; only 40,000,000*l.* was with foreign countries. On the other hand, in the case of the mother-country, 536,000,000*l.* represents trade with foreign countries, and only 179,000,000*l.* was with our own Empire. Thus only some 20 per cent. of the trade represented by numerous colonial delegates at Ottawa was foreign trade, while of the United Kingdom trade, represented by Lord Jersey, some 75 per cent. was with foreign countries.

Per head of population the foreign trade of these colonies is under 3*l.* 13*s.*, while in the case of the mother-country it is over 14*l.* per head.

As a matter of fact, the trade of the mother-country with the colonies represented at Ottawa is only 12 per cent. of her total trade. It must be remembered that the other divisions of our Empire, India and the dependencies, account for the larger portion of the mother-country's trade within the Empire.

With these figures before us we may well ask whether our policy of watching, waiting, and doing nothing is not encouraging dangerous delusions in the colonial mind? The representative of Tasmania, the Hon. Mr. Fitzgerald, who voted for the resolutions, subsequently explained to a Canadian audience the views of the delegates, thus:—

> We felt that at the Conference we were taking a bold departure from the traditional policy which Britain has always carried out towards its colonies. We also felt it was a departure that was likely to become permanent. We felt that the time had come when the colonies should propose initiative action to the mother-country. . . . We felt assured we were taking the first step in that Imperial Federation we all look forward to.

A practical comment on this demand for a new departure in the fiscal policy of the mother-country is provided by the facts that Tasmania has no foreign trade at all, a population less than that of the town of Leicester, and a revenue equivalent to less than one-third of the revenue of the School Board of London.

All lovers of the Empire will, however, hope, with the Hon. Mr. Suttor (New South Wales) that the Conference will 'bring forth closer relations than those of trade, and that the time will come when

they would discuss subjects of higher importance—the common welfare of the Empire.'

The common welfare of the Empire demands the assured supremacy of the sea. To sufficiently satisfy that demand two things are required:

1. An adequate Imperial Fund;

2. The Imperial machinery to administer that fund which will command the confidence of all the contributing portions of the Empire.

JOHN C. R. COLOMB.

HOW TO MULTIPLY SMALL HOLDINGS

Prefatory Note

I am one of those who are convinced of the necessity of supplying small areas of land to our rural workers for their own cultivation. When the suggested system of co-operative ownership was brought under my notice, it naturally, therefore, received attention, and I was glad to be able to give facilities for having the system explained in my district. After an address by Mr. Harold Moore, I recognised the importance of the system, and the advantages which it possessed, not only to landowners who wish to extend small holdings, but also to the occupiers, by securing for them a perpetual title, as well as the many collateral advantages arising from co-operation. Unfortunately, however, in attempting to apply the system to a farm upon my estate the difficulties arising in connection with a settled estate became apparent. Under our recognised system of English land tenure, an owner can by no means do what he likes with his own property, being partially debarred from the disposal of his land either for his own advantage or for that of other persons. The Settled Land Act of 1882 has given powers which formerly were not possessed, but before more desirable systems of land holding can be fully introduced there must be a fuller and more complete reform in the system of our existing land tenure.

As the result of the meeting held at Tyler's Green, near High Wycombe, it appeared that there were many who would like to purchase small areas by instalments, the total area so applied for being eighty-three acres. I was unable to arrange to gain possession of that extent, but, by arrangement with an existing tenant, I found it would be possible to obtain possession from Michaelmas of an area of fifty-five acres conveniently situated for the village. A committee was, therefore, immediately formed to acquire that extent. The difficulties arising from its being a settled estate then became apparent, for the trustees of my estate could not consent to a sale if the purchase money were payable to them by instalments.

In order, therefore, to carry out the proposal it was found necessary that the Committee should purchase the land, paying my trustees in cash, raising the necessary sum upon security of the property.

At a meeting held in October it was therefore decided to complete the arrangements in this way, the land being taken up by twenty-three individuals in areas of from one acre to three acres each, these individuals together forming a Landholders' Committee. Four of these intending occupiers will purchase in cash, but the remainder will pay to the Committee a sum at the average rate of 2*l.* per acre per annum for a term of fourteen years; each one also paying a similar sum at entry, in order to provide some corporate funds under control of the Committee, and to pay the expenses of completion of the arrangement. With the cash which some of the occupiers are prepared to find now, I am informed that the Committee will be able to raise the 1,200*l.*, the amount agreed with my trustees as the purchase money of the land. The annual payment of 2*l.* per acre, or 110*l.* for the whole area of fifty-five acres, payable for the fourteen years, will at the end of that time discharge the liabilities of the Committee, as well as paying four per cent. interest upon the amounts owing at the end of each year.

The exact partition of the land to suit the individual wishes of the occupiers is now being completed. This is a matter concerning which some would think there would have been some difficulty. It has, however, been left entirely to the occupiers themselves, and, from what I learn of the results of their last meeting, no difficulty has arisen. The method they have adopted is to refer this question to a small committee of themselves, and this committee has apparently been able to suit the requirements of each of the intending occupiers.

This article was written upon my suggestion; and without expressing my agreement with all the opinions contained in it, many of the proposals made are, to my mind, worthy of consideration by those who desire to extend small holdings.

CARRINGTON.

Those persons who have considered the subject of allotments and small holdings, and who have noted the results obtained in districts in which they are numerous, will probably agree in certain definite conclusions, which may be stated as follows:

1. That no man is able to obtain a satisfactory living from an independent small holding, as a sole means of livelihood, unless he has money, is prepared to work hard, and possesses far more knowledge and experience than are usually found in rural districts.

2. That the majority of persons classed as agricultural labourers cannot fulfil these necessary conditions, so that any labourer wanting land should be limited either to some area of grass or to such quantity of arable land as he can work in his spare time; which would but rarely exceed one-eighth of an acre.

3. That there are many persons in our rural districts, mainly de-

pendent upon industries and trades, to whom the possession of a small area of land would be of considerable advantage, seeing that many of this class have both the skill and capital necessary to ensure success, and ample time available.

Having regard to these conclusions, those who wish to assist the extension of small holdings have naturally given their attention to the way in which this can best be done for the benefit of persons who want land, and have some other means of livelihood. That this class is numerous few can doubt who have given consideration to the matter. In almost every village there are small shopkeepers, mechanics, farriers, blacksmiths, bricklayers, carpenters, hucksters, and casual rural labourers, all of whom have diminishing work in consequence of the depopulation in our rural districts, and the lessened spending power of all classes directly dependent upon the land. Many of these persons can only be enabled to remain in country districts if they are provided with some area of land upon which they can grow what is needed for their own consumption, or can be sold to their immediate neighbours. Some of these, and also other classes, have families growing up for whom occupation must be found, and if they can be provided with work on the land they will be kept from coming into the towns. Then there are those who have had to give up regular work owing to age or ill-health, but who are competent and anxious to cultivate some area, the produce of which would enable them to obtain a more comfortable living than would otherwise be possible, and in some cases would be the only means by which they could subsist without coming for aid to the poor-law authorities. Where land has been made available for any of these classes, the result has invariably been satisfactory.

In view of these facts it will be admitted that to increase the facilities by which land can be obtained for the benefit of those possessing some other means of livelihood is a step which is most desirable for the welfare of this country, and may tend towards checking that exodus from our rural districts which all writers agree is a national danger.

The legislative enactments which have been passed during recent years to facilitate the subdivision of land for the benefit of small cultivators show that the desirability of aiding this course is generally admitted. These Acts include the Allotment Acts of 1882, 1887, and 1890, and the Small Holdings Act of 1892. Even, however, with the powers given under these Acts the extension of Small Holdings has not been specially rapid. It will therefore be useful to notice those risks and difficulties attendant upon letting or selling small areas which have hitherto retarded their increase, and also to consider any practical means which could be taken in order to safely supplement existing powers for the benefit of those who belong to the classes before named. More especially are these points worthy of

consideration at the present time because they will indicate some of the difficulties falling upon a Parish Council hiring land in accordance with the provisions of the new Local Government Act, and perhaps will suggest means of lessening the risk incurred by the ratepayers in districts where these sections of the Act are applied.

The difficulties which landowners now experience in supplying small areas to those for whom they would prove useful can readily be summarised. Under certain circumstances the giving up of a part of a large farm may interfere with the system of culture. Such a course may interrupt communication from one part of the estate to another. It may lead to injury to neighbours by a portion of the land taken being afterwards negligently cultivated, or left uncultivated. Land suitable for allotments must have a road frontage, and having that frontage forms probably the most valuable portion of the farm. This is not only because its easy access renders it adaptable for a greater variety of cropping, but because from its situation such land has perhaps for long periods had more manure and cultivation, and is in better heart and condition, so that if separately let off it would deteriorate the acreage rental value of the remainder of the farm, or, in special cases, prevent a tenant being secured for it without greatly increased difficulty. Then rental value frequently creates difficulties, inasmuch as tenants, forgetting that they are obtaining the most accessible land probably in better condition than any other part of the farm, frequently expect the acreage rent to be about the same as that paid by farmers renting adjoining large areas of poorer land. But the greatest difficulty experienced by landowners, anxious to encourage small holders, is that many who profess they want land have neither the time nor the necessary qualifications to work it successfully. These applicants will be mainly labourers who either have mistaken views as to their own ability to work, or have been persuaded that they should have land by those who think an allotment for every labourer is necessary to bring happiness to our villages. Cases are numerous where land has been divided into small areas, and tenants who had previously expressed so strong a desire to have them have given up their holdings after working them only a short time. In a case known to the writer, where a landowner, in response to local demand, had obtained possession and subdivided the land which was desired, one-half of the tenants vacated within two years. Cases are not entirely unknown where, after a local demand for small areas has been fully satisfied, certain of the tenants have never entered upon nor done any work upon the area taken by them. The English Land Colonisation Society, founded last year in order to aid the extension of small holdings, states, in a report issued in July, that a large majority of the many hundreds who applied to the Society for assistance to obtain land were quite incompetent to cultivate it. Bearing in mind the great trouble and loss involved in having

small areas come into hand neglected and out of cultivation, it is natural for these various reasons that landowners should exercise care and caution before satisfying a local demand for small holdings.

Another difficulty mainly felt by those who would be competent cultivators is in reference to securing that tenure of the land which will enable them to erect the buildings they may desire. The Small Holdings Act gives special facilities for such class; but, even when the County Council of the district is prepared to put the Act in operation, far more capital is required than a competent cultivator could usually command. Land can frequently be purchased on payment of a small deposit, the remainder being left upon mortgage at interest which will about equal the rental value. Such a course, however, renders the purchaser at any time liable to be called upon to pay the amount of mortgage-money, when a failure to do so may lead to forfeiture of his land with the improvements thereon. Moreover, such a mortgage will prevent the cultivator obtaining assistance by way of mortgage in aid of any buildings he may wish to put up. Some landowners have divided their estates into small lots and then let them at an annual sum, covering rent and an instalment of purchase-money. This, however, is a difficult arrangement to be made with small independent tenants, and frequently has failed after payments for two or three years, as the occupiers are not able to secure a clear or good title, while the income to the landowner is uncertain and difficult to collect.

A consideration of these various difficulties shows that the exercise of the powers now vested in Parish Councils for buying or renting land will probably lead to considerable difficulty and risk, unless the greatest care be taken in putting the provisions of the Act into force. Parish Councils are not likely to exercise their powers of purchase. If, however, owing to the pressure brought to bear upon them, land were hired to the extent necessary to supply all applicants, it is probable that in two or three years many of those areas would be given up, in some cases without payment of rent due and in a bad state of cultivation. The Council would be bound to pay the rent of the area held by them, and under these circumstances may sustain loss either by having to cultivate the land themselves, or to let portions coming in hand at a reduced rent. Is there any plan by which this risk can be obviated, and Parish Councils as well as private landowners be assisted to supply small areas where required by those classes who have been shown to be capable of using them? The writer believes that this can be done by the recognition of the principle of co-operation, more especially if in conjunction with a wider extension of the system of perpetual leasing. This proposal will therefore now be fully explained.

This suggested co-operation would be carried out by forming into a Corporate Body all those in any specified district who wished

for land, and who in the opinion of their co-operators were able to work it. This Corporate Body should then acquire a farm of the total area desired, the area so obtained being divided into separate holdings as required by each applicant. The Corporate Body would obtain a property at the ordinary agricultural price, and if rented only would add any sum necessary for tithe, rates, and other outgoings, the total payment then being apportioned upon the respective holdings by a committee appointed by the intending occupiers.

In order to introduce this system the first step necessary would be to hold a meeting of those who desire to occupy land in any particular district. If at this meeting there were found to be a sufficient demand by those persons having the necessary qualification for the profitable use of small areas, a committee might be formed in order to consider the suitability of any farm in the desired locality of which possession could be obtained. As soon as the committee had found a suitable farm it would be for them to assure themselves that all, or nearly all, the area would immediately be occupied at prices making up the total cost.

If the committee had definite applications from responsible and suitable intending tenants to ensure a sufficient area being taken up, they could at once be constituted into a Corporate Body under the Companies Acts, and arrangements for taking the farm concluded. The Corporate Body would act through a committee of management, who would have to determine the amount to be immediately paid to meet costs, valuation on entry, or other payments; and, on this being contributed by the individual occupiers in proportion to the annual payment assessed upon the area taken by them, possession of the property could be given.

Tenure on this principle would enable many landowners to supply the demand for small areas which they would be otherwise unable to do, for it would not be necessary for them to partition a large property, and the committee and the inquiries made by them would ensure competency of tenants. Moreover, if this system be applied to letting land when hired by Parish Councils, the risks of applying the powers given under the Act would be obviated or minimised. Parish Councils will be most useful in the formation of such bodies of intending occupiers, whether they are formed to rent land from the Parish Council or independently, and the first meeting of the intending cultivators might be called by the Council.

Some of those, however, who wish to occupy a small area and are competent to work it would prefer to acquire a permanent title to the land which they cultivate. To these persons the suggested co-operative action would be most beneficial. If, when a committee has been formed, it was found that the majority of the intending occupiers wished to erect buildings upon their land, or for other reasons desired to acquire a better title than ordinary tenancy would give, the

committee would consider the best manner in which they could acquire a permanent title. In some cases this might be done by the Corporate Body acquiring the title to the land subject to the payment either of a perpetual rent calculated at a percentage upon the value of the property, or of an annual payment for a fixed term, the period of which should be so fixed that the amount paid in excess of the rental value during that term would be the equivalent of the capital value of the property. The Corporate Body thus having obtained the land would grant the respective portions to individual occupiers as they might desire. The exact means to be adopted for carrying out this method would vary in accordance with the circumstances of the owner and the land to be secured.

The title might be given by a lease for such a term as 1,000 years, from the landowner to the Corporate Body, and a second lease from the latter to each individual occupier. Both leases would either provide for the payment of a rent during the entire term, or for the payment of an annual sum for the first ten to twenty-one years; in that case free occupancy to be given for the remainder of the term. In either case there should be special covenants in the lease between the Corporate Body and the individual. These covenants should be those which appear to be desirable to secure the fullest liberty and advantage to the intending occupiers, with all those restrictions which may appear to be beneficial to the community. Thus, as the land is leased for agricultural purposes, the price paid is its value to be so used. A restriction would therefore be reasonable that the individual holder should not use it for any other purpose without the assent of the Corporate Body, which, it must be remembered, would consist of the whole of his fellow-occupiers. It should then be provided that the Corporate Body could have power to enter into possession of any holding if required for other than agricultural purposes upon paying the value of the holding at the time possession was required, such value to be settled by an arbitrator if it could not be agreed upon. A similar power could also be reserved for re-entry for any other purpose, where there was a unanimous opinion on the part of the Corporate Body that possession should be taken of any particular holding. It might further be provided that no occupier should hold more than a defined area without the assent of the Corporate Body. Without some such covenants it is possible that in the course of time the various methods of co-operation introduced and rendered practicable by the frequent meetings of the original Corporate Body would fall into disuse, with a result that rivalry and competition would take place, injurious to the position of all who were cultivating the land.

In some cases a different plan might be considered more desirable. This would be a sale to the Corporate Body on payment of a deposit, the remainder of the purchase-money remaining on mortgage,

to be annually reduced by payment of a specified sum. A deed of covenant could then be executed between the Corporate Body and the individuals, by which similar conditions to those just named would be stipulated as a basis for the division of the land. Subject to the conditions of this deed an agreement of tenancy could be entered into between the Corporate Body and the individual under which rent should be paid for the specific term of years, it being provided that at the end of the stated term, and on the completion of the payments, the individual should have a conveyance of the land, thenceforth holding it without payment, but subject to the restrictions named in the original deed of covenant. The annual payment secured under such an agreement would be the individual's proportion of the amount sufficient to pay the interest on the mortgage with such additional sum as would, by being invested each year, make up at the end of the agreed term a sum sufficient to discharge the mortgage. On entry under this arrangement the individual would pay such an amount as was found necessary for deposit and costs, this sum being proportioned in relation to the annual payments.

Leasing to a Corporate Body under the system advocated would be free from the difficulties which are encountered by a landowner attempting to deal on the same lines with independent tenants in respect of separate and small areas of land. He would receive his rent in one sum as from an ordinary tenant, but with greater regularity, the instalments of the purchase-money would be paid in substantial amounts, and there would be security for the payments in the amounts agreed to be paid to the Corporate Body by the individuals.

But not only would the extension of such a system of co-operative land-holding enable landowners to facilitate the acquirement of land in small areas by those who wish to purchase the same, but the system would give numerous collateral advantages which the cultivators would not be able to obtain if acting independently. By their union they will be able to found agricultural credit banks on the co-operative system, as advocated in the publications[1] of the newly formed Agricultural Banks Association. These banks will secure, by the principle of common liability, credit for every member of the co-operative body to a larger extent than he could individually obtain. Periodical meetings might be held for the purpose of discussion on farming topics, and these would lead to the dissemination of much useful knowledge. It is, in fact, from such frequent meetings of practical cultivators, giving to one another the benefit of the results

[1] *Memorandum and Rules for an Agricultural Credit Society*, 24 pp., price 6*d*. (January 1894). *How to Start an Agricultural Credit Society*, 16 pp., price 3*d*. (October 1894). Both published by the Agricultural Banks Association, Palace Chambers, Westminster, S.W. Also *Village Banks* by H. W. Wolff, 48 pp., price 6*d*., Published by P. S. King & Son, King Street, Westminster, gives information on this subject.

of experience of new crops or special modes of feeding or cultivation, that much improvement in agricultural methods has been brought about. The meetings would also afford an opportunity of hearing addresses or lectures from skilled experts, who can give valuable advice on subjects they have specially considered. The existence of such a corporate body would permit of the trial and possible introduction of profitable village industries, which independent cultivators could not attempt. It would assist in obtaining better pecuniary results to each individual by rendering possible the joint use of labour-saving appliances, by securing combination in marketing, and by obtaining farm requisites on better terms than can be quoted to an individual buying in small quantities: thus decreasing cost of production, as well as lessening labour. It would prove of the greatest utility in securing the introduction of methods of preserving fruit, vegetables, and other produce in the best manner either for sale or for winter consumption; and if the area of the settlement were sufficiently large, a dairy factory might be founded, which would reduce labour and increase the quality and value of the product. Then there would be a great advantage to the occupiers in the fact that the payment would be due to a committee of fellow-occupiers similarly situated. If for special reasons, with which neighbours must necessarily be acquainted, the occupier found it difficult to pay the amount due from any particular holding, every consideration would certainly be given to a request from him that the payment due might be postponed. If, moreover, that payment were an instalment of purchase-money, there would be little difficulty in consenting to a postponement, as its only effect would be the prolongation of the term during which the instalments were to be paid. But the most important advantage gained by the adoption of this system arises from the method of fixing the value of the holding and the method of paying the purchase-money if the occupier wish to acquire a perpetual title. Whether the complaints frequently heard from those who rent small areas that they are paying a higher price than adjoining large farmers are well founded or not, they must be removed when the whole area required for subdivision is obtained at an ordinary agricultural rent, and the apportionment upon the different holdings is made by a committee of the occupiers themselves. For those who wish to acquire a title to the land without paying the whole of the purchase-money the suggested system is free from the disadvantages and liabilities of mortgage, and, moreover, allows for a gradual payment of the purchase price of the land, which cannot readily be effected by other means.

But it will naturally be asked whether the principle advocated has been practically tried, and, if so, with what results. Reference should therefore be made to an example of each of the methods suggested. Co-operative tenancy has certainly been successful in the

case of an Allotments Society at Denmead, six miles from the town of Havant. This society hires about eighty acres at a rental of 115*l.* a year, which is divided among forty-five tenants at a rental apportioned among themselves amounting to a total of 148*l.* per annum. The report issued this autumn states that, in spite of the bad season, the members of the society have done fairly well, and that there is a great and general improvement in the state of the land. All the rents due had been paid up to that date; the whole of the land was occupied in areas ranging from a quarter of an acre to three acres; intending tenants were waiting for admission if more land could be secured; and, after paying the rates and other expenses, and retaining over 25*l.* balance in the hands of the society, a return amounting to a reduction of rent at the rate of 3*s.* per acre was made to all members. An instance of the application of the system of perpetual leasing, where the capital value of the land is to be paid during the first few years of the term, is to be found in Wiltshire. In 1892 Major Poore, C.C., secured for a co-operative body the freehold of a farm of 112 acres, near Winterslow, in that county, the price paid being about 15*l.* per acre, which sum was left on mortgage. The property being so obtained, the committee, representing nearly fifty intending occupiers, assessed the value upon the respective portions, the prices so assessed varying from 8*l.* to 30*l.* per acre, depending upon position and quality of the land. A lease was then granted to the individual holders for the term of 2,000 years, subject to the payment for the first fourteen years of an annual sum of 10 per cent. upon the value assessed upon the particular area. This annual payment, it was found, would more than discharge the mortgage upon the property, with 5 per cent. interest upon the same. As to the results of this experiment, the majority of the holders have now been in possession a year and a half, and, though the payments exceed double the annual value, there is no instalment due from any of the occupiers; while the instalments, when completed, will leave probably 500*l.* in the hands of the Corporate Body after paying all mortgage charges, costs, and interest, this surplus arising from the fact that the total values assessed upon the different portions substantially exceeded the original purchase-money of the land. Ten or twelve of the holders are now erecting buildings; insurance clubs and other means of co-operation are being successfully managed; a far better tone is prevailing in the village than formerly, owing to the idea of mutual help engendered; and weaving and other industries are being introduced; while conversation with any of the holders shows that they are satisfied with the results of their organisation. An instance of a co-operative settlement where a conveyance is to be granted to the individual occupiers is found in Leicestershire. In this case Mr. Arthur Basil Markham has divided an area for small holdings, giving the independent purchasers occupancy on their agreeing to make payments at the rate of 37*l.* 10*s.*

per acre in twenty half-yearly instalments, at the end of which time the conveyance will be granted subject to the restrictions of a mutual deed of covenant. The price named is 30*l.* per acre, with interest at the rate of 3 per cent. per annum on the unpaid purchase-money for the term named. The deed of covenant was executed in May 1893, and up to the present time no difficulty has arisen, and the arrangement seems to have given general satisfaction. Thus we see examples of each of the three methods which are suggested in this article which have been in operation for a sufficient time to form opinions as to the results.

New settlements of co-operative holders are now numerous. In August 1893 the English Land Colonisation Society was formed, its object being 'to aid the establishment of people on the land, and assist the revival of rural industries.' This society naturally gave attention to the possibility of extending co-operative action in the direction suggested. Some useful suggestions were made in a pamphlet issued in November 1893, entitled *Home Colonisation*; while in the April issue of its journal, *The Co-operative Land Record*,[2] much information was given as to the advantages of co-operative settlements. It appears that the system was being applied with the assistance of the society in Sussex and Suffolk, while committees were being formed in other counties. The society has collected a great variety of information in relation to co-operative effort; has had tables prepared of instalments of payments extending over various terms; and has drafted forms of agreement adaptable for various conditions. It would thus appear to be able to assist landowners or Parish Councils who might be willing to attempt the formation of such co-operative settlements as are suggested in this article. At a two days' conference, held in October, for the discussion of various matters affecting small holdings and co-operation, it was stated that the society had advised in thirty-five different places, and it was hoped to complete arrangements for six settlements, in addition to helping the formation of committees to take up land, not directly under the control of the Society.

Amongst the last-named efforts is one by Lord Carrington, as named in the introductory note to this article. Earl Nelson has also consented to supply a farm for those who wish to rent small areas, if a sufficient number of persons possessing such qualifications as are named in the opening paragraph of this article apply to take up an entire property; while Mr. Jasper More, M.P., is taking into consideration the application of some proposals of this nature upon his estate in Shropshire.

[2] *Home Colonisation*, by Rev. J. B. Paton, D.D., with an appendix by a practical land agent, 16 pp. 8vo., price 2*d.*, second edition, published by Messrs. J. Clarke & Co., 13 Fleet Street, E.C. *Co-operative Land Record*, for April, 8 pp., price 2*d.*, published by the English Land Colonisation Society, 41 Bedford Row, W.C.

It would therefore seem that the encouragement of such settlements under corporate control in many of our rural villages is a practical step; while its desirability in meeting a want of rural workers will generally be admitted. In any parish where this principle is applied, there will be in future years a body of persons bound together under a mutual covenant, and transferring their individual interest to their heirs and assigns. The property so held for the mutual benefit of many in the parish may thus come to be looked upon to some extent as parish land; while if an increasing number desire to have an individual interest in such land, the area can possibly be extended as opportunity offers. If this become the case, the system may well be considered a beneficial substitution for those rights of common which in times past the inhabitants of these villages may have possessed, for it would create far more valuable interests than such common-land could have given. It would possess all the advantages gained by the unity of interests involved in common ownership, while it would further create that individual interest in particular portions of the soil which is necessary if the occupier is to earn an adequate and permanent reward in proportion to the labour and money expended by him. Bearing in mind the limited nature of the funds at the disposal of our Parish Councils, it would therefore appear that it can usefully become a matter of consideration whether the promotion of such co-operative bodies and committees will not be the most useful method for enabling those who desire it to gain some interest in the land, without directly involving cost, risk, and responsibility to the parish revenue.

HAROLD E. MOORE.

LORD BACON VERSUS PROFESSOR HUXLEY

IT is most difficult to deal with the philosophic writings of Mr. Huxley —not, I think, because of the strength of his philosophy, but on account of its ambiguity. He always seems to be aiming at conclusions which are not distinctly expressed—conclusions, indeed, which I do not think he himself really holds, and which, when attributed to him by others, he generally repudiates. Such is eminently the character of an article which he has lately contributed to the scientific journal called *Nature*, on the twenty-fifth anniversary of its first publication. The article is entitled 'Past and Present,' and purports to give a generalised view of the triumphs of 'science' during the last half-century over all who were, or still are, its opponents. By the word 'science' he expressly explains himself to mean 'all the regions into which the intellect can penetrate.' It is needless to say that this is a definition which embraces the whole sum of human knowledge, whether actual or potential; and the great aim of Mr. Huxley's paper is to identify these 'regions' with the physical sciences alone—these being further identified by calling them 'the specialities,' to which the 'workers in science are devoted,' and in which the 'power and fruitfulness' of certain special methods, called the 'scientific organon,' have become 'so obvious.' The combined effect of all these words and phrases is, first, to represent the purely physical sciences—that is to say, our knowledge of matter with its laws and energies—as the only region into which the human intellect can penetrate at all; and, secondly, to represent the methods of physical investigation appropriate to those sciences as the only methods, or 'organon,' by which any human knowledge of truth can be attained. If Mr. Huxley does not mean this, he has been very careless in the use of language. But, unfortunately, this interpretation seems to be the only one which can be reconciled with the context. In perfect consistency with the doctrine that physical conceptions are the only region into which the human intellect can penetrate, Mr. Huxley goes on scornfully to denounce any notion that there are two spheres—or, as he calls them, 'two worlds'—one being a sphere in which we can only move successfully by the 'strict

adherence' to what he calls 'scientific methods,' and the other being a sphere in which truth can be reached by what he calls 'quite other mental processes.'

Although these words are not explicit, we can have no doubt as to what they mean. Other words and phrases—none of them very perfect—are commonly employed to express the same idea of two different and contrasted spheres, to which different faculties of the human intellect are specially, although not exclusively, appropriate. Faith and reason is one common formula of expression, knowledge and belief is another. Neither of them can be safely used without qualification, because faith may be full of reason, and reason may be inspired and guided by a most reasonable faith. But, still, a residuum of difference remains, both as regards our consciousness of separable mental faculties, and as regards our perception of correspondingly separate subjects of thought. Strictly speaking, we have no faculties which can work without the help of others, nor is there any subject in which our conceptions can be said to belong exclusively to one or the other category of thought. That our atmosphere, for example, is full of dust is a purely physical conception, and can only be absolutely ascertained by the methods of purely physical research. That the world is full of what the German evolutionist, Professor Weissman, calls 'Purposiveness' is another proposition which also concerns many purely physical phenomena, but is essentially an intellectual conception, and can only be recognised by the aid of 'quite other' processes of mind, and quite other instruments of investigation. Mr. Huxley disparages this field of thought altogether, and insists that, under the continual advance of that kind of knowledge which is attained by physical methods, the other sphere of thought, which cannot be subjected to this organon, is being rapidly undermined, and will soon be altogether abandoned. That this is the only intelligible meaning of the paper is confirmed by its early attack on Lord Bacon, who is treated with a somewhat supercilious contempt. Mr. Huxley says that though few have read, and still fewer have tried really to comprehend him, still a 'venerable tradition bids us glorify him as the guide, philosopher, and friend of science,' and especially in his insistence upon the division of the world of thought into two—an old and a new. In the new world the 'scientific method' was inculcated, whilst in the old world 'it was to be anathematised.' In that old world absolute dependence was to be placed on the 'quite other mental processes.'

As Mr. Huxley does not quote any passage of Bacon's works, but gives us only the purport of what he calls the 'venerable tradition' about him, it may be well to look for some words which Bacon did himself use on this very subject in composing a prayer for the use of students. It is now some forty years since I first heard this prayer used in domestic worship by Principal J. D. Forbes, one of the most

distinguished men of our time as a teacher and investigator in the physical sciences. He did not seem to consider its doctrine as at all absurd; on the contrary, he read it with fervour, and spoke to me of it as amongst the grandest of its author's writings. Here are some of its words:

> This also we humbly beg, that human things may not prejudice such as are divine, neither that from the unlocking of the gates of sense, and the kindling of a greater natural light, anything of incredulity or intellectual night may arise in our minds towards divine mysteries; but rather that our minds thoroughly cleansed and purged from fancies and vanities, and yet subject and perfectly given up to the divine oracles, there may be given unto faith the things that are faith's.

It was certainly something more than the magnificent march of Bacon's English prose that led my scientific friend to pray earnestly this student's prayer. It was because he felt its power and truth. Yet the distinction it assumes is the very distinction which Mr. Huxley goes out of his way to hold up to disparagement and almost to ridicule. He says of this distinction: 'Men were called upon to be citizens of two states in which mutually unintelligible languages were spoken, and mutually incompatible laws were enforced, and they were to be equally loyal to both:' This absurd idea was for a long time, Mr. Huxley goes on to say, the basis of a hollow and conventional peace between Science and Theology. It was first broken by the invasions of Astronomy. I suppose he refers here to the old and well-worn stories of Copernicus and Galileo. Next, he says, there was another breach of the peace by the advance of Geology, which is said to have abolished all belief in what Mr. Huxley calls 'cataclysms.' This, I presume, refers to Mr. Huxley's old contentions against the possibility of a Deluge—a reference which comes at a most unhappy moment, when geologists of the highest and most orthodox standing, such as Professor Prestwich, have lately come to believe in some sudden and extensive submergence, of continental dimensions, in very recent times. Then came—says Mr. Huxley—in 1859, the publication of Darwin's *Origin of Species*, which has 'finally abolished' what he calls the Pax Baconiana. This, together with some other invasions which are already in sight, will soon, he says, so greatly enlarge the frontiers of the New World 'within which scientific method' is supreme that 'little will be left but cloudland for its rival.'

The meaning of this language seems unmistakable, in spite of the careful avoidance of definitions and the repeated use of ambiguous phrases. We know what the sciences are which, he says, have invaded the 'old world.' They are astronomy, geology, biology, mechanics, and the like. We know, too, the 'organon' or methods by which alone these sciences have been extended. Those methods have been the observation of physical facts—the investigation of physical forces and energies—by such tools and implements as the telescope, the

microscope, the balance, the scalpel, the spectroscope, laboratory analysis, and the like. All of these instruments belong to one method —they are all concerned with the phenomena of matter. Mathematics, which may seem in one aspect to be concerned with a more abstract kind of truth, is itself tied and bound within the same area, not only of physical phenomena, but even of these only in so far as they are reducible to numerical relations and measurable units. Mr. Huxley's language, therefore, is that all kinds of knowledge to which these physical methods are inapplicable are to be relegated to 'cloud-land.' Of course, this result is simply nonsense. There is no need of arguing against it, considering that all the highest interests of human life—all moral and spiritual truths on which we habitually rely in our individual, social, and political conduct—are entirely inaccessible to this physical 'organon' or method. We must at once set aside any philosophy as irrational which denies to our knowledge of any kind of truth the title and rank of science. The habit, which has become common, of confining the word 'science' to the physical sciences is a habit incapable of defence. The essential meaning of the word is not, indeed, simply knowledge, but systematic knowledge —knowledge of things in their true relations with each other; and although the knowledge of anything in all its relations can never be grasped by a finite intelligence, yet it may be said with accuracy that all the highest relations of things which are accessible to us are relations which lie altogether outside the methods of physical investigation. Mathematical demonstration may stand high in respect to certitude, but it stands low in the scale of every other quality. There are a thousand things which are quite certain, but which have a narrow significance. Neither love, nor justice, nor mercy, nor benevolence, nor duty, nor obedience to legitimate authority, nor, indeed, any other moral or spiritual truth, is even approachable by the 'organon' which Mr. Huxley sets up as the coming ruler over all 'the regions into which the intellect can penetrate.' But spurious as every philosophy must be which sets up the purely physical sciences, and purely physical methods of investigation, as the highest branches and the surest methods of human knowledge, it is not less spurious in another point of view—and that is in its real disparagement even of those physical sciences which it misrepresents in the very act of bowing down to worship them. Those sciences are real steps in the 'great world's altar-stairs that slope through darkness up to God.' But this philosophy would convert them into mere idols 'which speak not through their throat,' but which are to be enshrined at the base of those altar-stairs, and are to bar all advance upwards to any worthier object of adoration or even of reverence. The fact is that in denying distinctions which Bacon saw, and which are indisputably true, Mr. Huxley is himself setting up a far deeper distinction between 'two worlds' than that which he ridicules and condemns. If he were to

stand up for the unity of nature, and if under the word nature he were consistently to denote the whole universe of being so far as known or conceivable by us, I should go heartily with him. But in this paper he does not do so. On the contrary, he adopts and dwells upon a separation between what is called 'the natural' and the 'supernatural' which is, perhaps, the grossest of all the fallacies of modern philosophy. There is not one of the physical sciences which does not lead us up to some 'law' which is an adjustment—a combination of elementary forces, a thing invisible, a purely intellectual conception—concerning some established methods of work which are obviously pursued by a Mind other than our own. Mr. Huxley's own special science, biology, is the richest of all in this respect. Yet in the paper now under review he does his very best to bring it down from its high estate and to reduce its phenomena to a lower rank by what he calls 'natural'—that is, physical—explanations. He boasts that science has established the history of man's existence to have been due 'to the same process of evolution as other animals,' and consequently to have been 'essentially natural.' Of course it has—that is to say, if by the word natural we mean to include the sum of all existence, including all the phenomena and all the invisible realities of mind and will.

But what does Mr. Huxley mean by the implied antithesis between results which are 'essentially natural' and results which are essentially distinct from these, or, in other words, non-natural? Does he not manifestly here imply the existence of those two separate worlds which he ridicules and condemns in Bacon? For myself, I must declare that I do not believe in 'the supernatural'—that is to say, I do not believe in any existence outside of what we call Nature which is not also an existence inside of it, and even filling it to the very brim. And what is this 'doctrine of evolution' of which Mr. Huxley boasts so loudly as destructive in its effects on that older world which, in Bacon's words, recognised the existence of 'Divine mysteries'? What does Mr. Huxley mean by 'evolution'? He makes the remarkable declaration that he does not mean mere Darwinism—the mere theory of natural selection; so little does he mean this that he declares that if all the conceptions promulgated in the *Origin of Species* which are peculiarly Darwinian were swept away, the theory of evolution of animals and plants would not be in the slightest degree shaken. I entirely agree with this most significant declaration—that is to say, I agree that whatever truth there may be, and certainly is, in the 'doctrine of evolution,' when properly defined and understood, is entirely independent of, and separate from, the special theories of Lamarck, Darwin, and others, with which that true doctrine is habitually confounded. The only doctrine of evolution that is indisputably true is simply this—that throughout the universe of Nature, so far as we know it, everything happens through the opera-

tion of definite causes, which are so managed as to co-operate in the production of certain definite results. This general doctrine has nothing whatever to do with theories about the ultimate nature of those causes, or about the conditions of time under which they have worked. It has nothing to do with the denial, for example, of so-called cataclysms in geology, or with the denial, in biology, of mind and will as the controlling agency in the direction of every kind of method. The wonderful steam-engines which are now common for the storage and distribution of energy in forms which economise to the very utmost all the materials employed—these are all strictly cases of evolution from the simplest steam-kettles which suggested the original idea. It is true each machine has been separately made, but only by a strict continuity of inventive thought developed according to natural laws governing the structure and operation of the human mind. The same doctrine of evolution is unquestionably applicable to the still more wonderful machines which are the abodes of life, and Mr. Huxley is right in a far higher sense than that which he intends when he says that the doctrine would remain wholly unaffected by the sweeping away of all the peculiarities of the Darwinian theory, or of every other theory similar in kind.

But, unfortunately, this is not the doctrine of evolution as it is understood, and quoted, and applauded by Mr. Huxley. That doctrine is simply and crudely this—that all life, as known to us in animal and vegetable organisms, has been evolved by the processes of ordinary generation, 'and no other.' Darwin's special theory was a step beyond, or below, this general assertion, because it specified a particular sequence of causes by which the results of ordinary generation were governed, which sequence was chiefly remarkable for its apparent reliance on pure fortuity in the development of new forms. This was the element in the theory which undoubtedly commended itself to many minds; because it was the element which got rid of what they call the supernatural, or, in other words, of the agency of mind in Nature. Mr. Huxley has never, I think, committed himself to this idea, except in so far as the emphasis he places on processes 'purely natural' seems to be inspired by that idea, and is certainly the favourite antithesis of those who have adopted it with passion. But Mr. Huxley has in this recent paper committed himself to the idea that life as we know it in Nature has never been produced by any other method than that of ordinary generation. Yet we may affirm with confidence that this idea cannot possibly be true. Ordinary generation is an organic process—a function of organic life for its own perpetuation when once begun. But it cannot have been its own origin. In this doctrine, therefore, Mr. Huxley seems to deny one of the most far-reaching conclusions of his own science, and the teaching of one of its very chiefest apostles. No one knows better than Mr. Huxley the doctrine of the great John Hunter—that life is

the cause of organisation, and not its consequence. Somewhere, and somehow, and at some time, organic life was really originated in our world, and the first organism was not its own originating cause, but, contrariwise, life was the cause of the first organism. It cannot therefore be true that science affirms of organic life that it began by ordinary generation and 'no other way.' But if life must have been at least once introduced into our planet by some 'other way' than ordinary generation, evolution as conceived by Mr. Huxley ceases to hold the place which he assigns to it. If organic life has certainly been otherwise begun, we cannot possibly decide on any safe *à priori* grounds that the other—the originating—process, whatever it was, may not have been many times repeated since organisms were first created.

Nor is the present course of Nature without some processes quite familiar to us all, whereby, conceivably, the growth or development of created germs may have been so hastened as very speedily to establish new lines of freshly adapted structures in correspondence with the requirements of new outward conditions. What we call ordinary generation includes a great variety of processes, the simplest of which is mere budding, or 'spontaneous self-division.' The immense and wonderful changes which are accomplished in a few days in the hatching of eggs, and, above all, in the metamorphosis of the lower forms of life, are at least a warning against every rash dogmatism on the necessary slowness with which all evolutionary processes are supposed to be inherently connected. If these really miraculous transformations were less familiar—so rapid and yet so enormous in the changes they effect—if we saw the results alone without seeing the stages also, it is pleasant to imagine how certain philosophers would have argued on the long ages which must have elapsed in the evolution of a grub into a fly, or of a caterpillar into a butterfly. As it is, we are blind to the wonder, and still blinder to its lessons. We forget this visible proof of the resources of Nature, and how it ought to impress us with the possibility of a most rapid work being done in the progress of creation.

But although the first beginnings of organic life must have certainly been due to some other process than that by which it has been since perpetuated, this is not the only certainty, nor is it the nearest to us, that condemns Mr. Huxley's theory of two worlds—one 'essentially natural,' and the other essentially something else, which is usually called the supernatural. The first beginnings of life can hardly be said to be within the grasp of biology at all; but it is happily true that a thousand facts which are not only well within its grasp, but are the special characteristic of all its results, are facts which belong distinctively to what is called the supernatural—that is to say, to combinations of matter and its energies under the direct control of mind. It is significant to observe that even in the physical

sciences some observers are finding themselves compelled to use the word supernatural in this accurate and restricted sense—as simply equivalent to super-physical. Astronomers in describing the so-called 'canals' visible in the planet Mars are now arguing that they are supernatural,[1] because they do not seem to be due to purely physical causes, but to the work of mind—of some intelligent beings controlling physical agencies for some purpose or design. No other science is so rich and so direct in the evidence it affords of this kind of guidance and control as the science of biology. And it is curious to observe that the Darwinian theory of evolution, and all other theories involving the same general idea, do necessarily in themselves involve the idea of the subordination of physical laws to the previsions and will of mind. For if it be true that all growth and changes in organs have taken place slowly, and by very gradual steps, then it follows of necessity that they must have begun, not in actual use, but in foreseen and fore-ordained preparations for it. And this, of course, is exactly what we do see in every individual birth, and what we probably would have seen if we had witnessed the birth of a new species. More and more distinctly recent discoveries, if they have strengthened the suggestion that ordinary generation has been at least one instrument largely employed, prove also that it has been so employed, not to produce fortuitous variations in all possible directions, but to produce variations in definite lines of progress towards higher and more specially adapted forms.

So far as the Darwinian hypothesis did really involve, or rest upon, the notion of fortuity in variation, and of an *ex post facto* selection from among such varieties by means of use, the theory appears now to have been generally abandoned. That the Darwinian idea of natural selection 'leaves many phenomena unexplained' is confessed by Mr. Huxley himself; whilst the fuller and truer confession would be that it explains nothing at all so far as the real origin of anything is concerned. It fixes on ordinary generation as the sole factor in results which that agency cannot possibly have begun, and in which it can never have been more than a subordinate, although a prevalent, agency ever since. That new organs have been evolved by the help of ordinary generation no man can doubt. But this does not in the least degree conflict with the certainty that all evolution has been of a mental, and not of a purely physical, kind. The very word organ implies the fitting of an apparatus to an appropriate function; and when any organic structure begins before its actual use was possible, we must recognise the super-physical, usually called the supernatural, element as supreme. A few years ago I cited—in reply to a challenge to specify a case—the evolution of the electric organs in certain fish, as examples of an organic structure being built up for a very peculiar

[1] *Nature*, November 8, 1894, p. 41.

function, through stages of embryonic and anticipatory growth, for a use which lay in a still distant future. The late Dr. Romanes admitted the truth of this example, but pleaded that it was a solitary case in Nature. If it were common, he said, he would be obliged to give up the Darwinian theory. But Nature has no solitary cases—none which are anything more than some unusually distinct exhibition of natural laws which are generally less conspicuously displayed. The truth is that what science has discovered and proved in respect to the electric organs of a few fishes is the universal law which gives us the true origin and evolution of every structure which we call an organ.—that is to say, they are none of them the cause of their own functions, nor the effect of them, but all of them apparatuses made beforehand for the performance of those functions by that agency which alone can foresee, and fore-ordain, and shape.

If there be really two separate worlds in the imagination of any man—one of them 'essentially natural,' and another of them 'essentially supernatural'—it is assuredly the world of mere physical causation which is being invaded and subdued by that 'quite other' world of intellectual agencies, which we know better than we know any other—the agencies of mental purpose and controlling will. And as there is no science in which this truth is so conspicuous as in the science of biology, so there is no writer with whom I am acquainted whose language is so permeated with teleological conceptions as that of Mr. Huxley when he writes as an expert in the interpretation of organic structures. It is only when he writes as a philosopher that he falls into this strain of contempt for all explanations which are not mechanical, or, as he calls them with utter ambiguity, 'essentially natural.' Happily he reverts to, or, as some may think, he relapses into, the language of true science when he takes himself as a subject for dissection, and tells us what he has found in reflecting on the source and cause of that attraction which biology has exerted over him, and has determined his own distinguished career in exploring its truly 'Divine mysteries.' Here is his own intensely teleological language in the recent preface to his *Collected Essays*:

> The only part of my professional course which really and deeply interested me was physiology, which is the mechanical engineering of living machines; and notwithstanding that natural science has been my proper business, I am afraid there is very little of the genuine naturalist in me. I never collected anything, and species work was always a burden to me; what I cared for was the architectural and engineering part of the business, the working out the wonderful unity of plan in the thousands and thousands of diverse living constructions, and the modifications of similar apparatuses to serve diverse ends.[2]

[2] 'Methods and Results,' Autobiography, p. 7. *Collected Essays*, vol. i.

This is, indeed, a great confession. It is admirable teaching, and, being so, it is thoroughly Baconian. It is even more definite than Bacon's nobler prayer, because Mr. Huxley describes and specifies, more in detail than Bacon does, the distinctive characteristics and scope of the two provinces of thought to which that prayer refers. The distinction—the contrast—which Mr. Huxley draws between 'natural science'—which, he tells us, was 'his proper business, but was nevertheless always a burden to him'—and that which he really 'cared for';—the description he gives of the 'genuine naturalist's work' as the mere 'collecting' of things, and 'species work'—corresponds closely with what Bacon refers to as 'the unlocking of the gates of sense,' and the 'kindling of a greater natural light'; whilst the precise and graphic description which Mr. Huxley gives, on the other hand, of those mental elements in biology which speak to him of 'engineering' skill and knowledge; of 'architectural' design in the building of the House of Life; of 'the working out of a wonderful unity of plan' in innumerable living things, all of which are recognised as 'constructions,' and modifications of 'apparatuses' with a view 'to serve diverse ends'—all this is strictly after the manner rather of Paley than of Bacon, and refers to a province of thought and to a class of conceptions strictly cognate with those to which Bacon refers as 'Divine mysteries.' The apprehension of truth concerning those invisible realities, Mr. Huxley here treats as a higher and nobler quest than the mere ticketing and assortment of physiological details. The further idea, that this lower work may possibly so satisfy some minds as to impede their ascent to the higher department of truth, is an idea so inseparable from all we know of the many intellectual impediments to knowledge of this kind that Mr. Huxley's forcible description of the upper region in which he has really lived does indeed give a striking emphasis to Bacon's doctrine that there is a great danger of some irrational 'incredulity' and some dark 'intellectual night' arising in our minds.

It is a comfort to find Mr. Huxley writing in such a strain as this—when he is not thinking of controversy, nor engaged in bowing down to that modern fetish, the word 'evolution,' but when he is giving us the result of a truthful self-dissection, and when he is exercising that separate organon, or method, which is indeed 'quite other' than those which are competent to deal with the physical sciences. His language in this passage, however much it may conflict with, at least, the apparent sense of his philosophical essays, is perfectly consistent with his language as an expert. That language —let it be repeated—has always been teleological in a very high degree; and although he has somewhere said that he has always struggled against the use of such language, he has found it impossible to avoid it. And why? Simply because Nature, and especially

biology, is full to overflowing of what men foolishly call the supernatural, and because it is simply impossible to describe her phenomena truthfully without using the language of conceptions which cannot be apprehended by the new physical 'organon,' but only by an organon as old as the spirit, and the intelligence, and the intuitions of mankind.

ARGYLL.

THE CRY AGAINST HOME WORK

On all sides nowadays home work is being unsparingly denounced. The practice of giving women work to do in their own homes is spoken of as the 'Curse of Out Work.' Even in the country, we are assured, the home industry devours the home.

'When an industry enters a home,' says one, 'the price paid for it at the outset is generally the sacrifice of the home itself.' An amended Factory Act should, we are told, protect homes against the desolating incursion of industries into them, and 'aim a blow at the infamous system of the domestic workshop.'[1]

Six years ago Mrs. Sidney Webb did not hesitate to hint that the abolition of home work was desirable, since 'it is the home workers who drag down the standard of life.' To-day even that careful investigator of industrial problems, Mr. Charles Booth, is found associating himself with similar sentiments, and advocating before the Royal Commission on Labour such legislative action as shall diminish the amount of home work.

In face of all this antagonism to home work it becomes most necessary that the public should be shown how far the alleged drawbacks to the system are real, and how far, when real, they are compensated for by any undoubted advantages.

What leads to Home Work

Taking industrial life as it goes on in the nineteenth century, there are many reasons—some of them good—why work is done in the home rather than on premises provided by the employer.

To begin with, much home work is plainly conditioned by the very nature of things. Demand for many classes of goods is perversely fluctuating, and constantly necessitates a larger number of workers than can find accommodation in the workrooms in which the normally sufficient supply of goods is turned out. On such occasions, if the Factory Act did not forbid it, women would work overtime like the men; but as this is mostly illegal, and even if legalised would

[1] Domestic workshops being private rooms in which work is carried on with regularity, but in which the only persons employed are members of the same family dwelling there.—*Final Report of the Royal Commission on Labour*, p. 20.

often fail to meet the exigencies of the case, the home worker is called into requisition. Very gladly does she respond to the appeal, and is usually so reluctant to relinquish such a welcome means of increasing the family income that the practice of giving work out is persisted in, even when the state of the market which led to its being offered has wholly changed.

The Interests of the Employed

For the fact is that home work does not spring into existence merely or even chiefly through the cupidity of the employer and the greed of the slum landlord.

It is the needs, tastes, and life circumstances of the women who constitute the vast bulk of home workers which give permanence and vitality to the practice of home work.

The desire of employers to lessen cost of production by saving the expense of fire, gas, and workshop accommodation is, of course, accountable for some amount of home work. But at the same time, the interests of employers in the direction of economy constantly coincide with the interests of the workers themselves in the direction of convenience and general advantage.[2]

There are indisputably thousands of women whose best welfare, as understood by themselves and by all who put themselves at their point of view, dictates that they should work in their homes rather than in workshops and factories.

I am not alluding only to widows, though the wisdom of keeping such amidst their children is obvious. Reference to the widowed workers, of whom there are over twenty thousand in East London alone, is apt nowadays to be dismissed with the flippant remark, 'Oh, we know all about that "circus-show"—she is always being trotted out'—the ignoble scoffer forgetting apparently that it is the frequency with which Death supplies material for the reference which makes the reference so recurrent. I am not thinking either of the crippled, the sickly, or the old, to whom going out in all weathers is manifestly inconvenient and dangerous, and who, moreover, would find it very difficult to get taken on inside.[3]

[2] In a less degree this statement is true of male home workers. 'The journeyman at his work in his own house felt more independent, as having full control over himself, the general conditions of his toil, and his hours of labour, limited only by the time fixed for the delivery of his work. He had also the advantage of being able to take work from several employers, or even from special customers on his own account.'—*Report to the Board of Trade on the Sweating System at the East End of London*, by Mr. Burnett.

[3] Said an old woman, a maker of crape flowers, to me one day, 'If I was to go askin' for work at the warehouse they wouldn't give it to me, they'd say, "You're no good, you're too old!" But I know how to do these 'ere flowers better nor the young uns. They can't do 'em as I does. It's the twist I gives 'em.' And here, moistening

The women whose case I would lay stress upon are the industrial wives—those women whose homes would suffer considerably by their absence did they go out to work, and who are yet forced to take part in some form or other of wage-earning industry—either invariably, because their husbands' wages are inadequate for the support of the family, or occasionally, because their husbands are out of work, sick, or on strike.

Let no one imagine that such women are only a small section of the large class of working-men's wives. The number of women who habitually contribute to family maintenance is far larger than is realised by the general public.[4]

Mr. Mann to the contrary notwithstanding, the *family*, and *not* the *husband*, is the unit of earning power amidst the working classes.

This is not the less true because no census returns can reduce to figures the extent to which women are co-earners with their husbands. But though much of their earning is earning disguised, and in the past was still more so, every one with any real knowledge of the lives of the masses is aware that it goes on, and needs to go on.

It is not merely in the nineteenth century that the working-man's wife is forced to supplement her husband's earnings. From the very beginnings of civilised life she has had to bear her share in family maintenance, and to do so in other ways than by merely cleaning rooms, rearing children, and preparing meals.[5]

Economists and statesmen have always realised this truth, but

her thumb on her under lip, she deftly turned a piece of black sarsenet round a lump of grey wool and showed me the result.

[4] In a recent United States Report on the Cost of Production, Dr. E. Gould gives the following result of an inquiry which covered 2,490 families in the United States and 770 in Europe:—

Proportion of Native-born Families entirely maintained by Earnings of Husband.

In America	63·7	In Germany	40·9
Average in Europe	48·6	In Belgium	37·3
In Great Britain	51·4	In France	27·3

[5] 'Cette société idéale où l'homme pourrait suffire aux besoins de la famille, et où la femme n'aurait qu'à vaquer aux soins de la maison et à l'éducation des enfants, n'a nulle part existé dans le passé.'—Leroy Beaulieu, *Le Travail des Femmes au XIX^me^ Siècle*, p. 23.

'For the woman of the hand-working classes there has never been any question of whether she should contribute to the labour of the community or not.'—Karl Pearson, 'Women and Labour,' *Fortnightly Review*, May 1894. Cf. article by present writer in the *Economic Journal*, March 1894.

Will Carleton, in one of his best known 'Farm Ballads,' shows more than a glimmering of this truth when he makes the old farmer say:

> 'Write on the paper, lawyer—the very first paragraph,
> That of all the farm and live stock, that she shall have her half,
> For she has helped to earn it through many a weary day,
> And it's nothing more than justice, that Betsy has her pay.'

the general public has glozed it over with such phrases as domestic duties, looking after the home, helping the husband. That a great many domestic duties, that much of the looking after the home, and nearly all helping the husband are as much taking part in productive industry as though a woman 'finished' trousers, or worked in a mill, has not been grasped, or, any way, has seldom been acted upon. If it had been, the suggestion sometimes made that a woman should be given a lien on her husband's earnings as an equivalent for the domestic duties she performs would not provoke the strong criticism it does,[6] nor would we find in Census after Census the industrial wives included in the unoccupied class.

Little by little the domestic duties of the married woman have become the daily toil of the factory hand, so that now, when the house-mother engages at home in tasks similar to those of the factory hand, she is none the less performing her domestic duties. Moreover, she is showing the monetary value of these duties and revealing the proportion her contribution to family maintenance bears to her husband's. This is one reason why wage-earning on the part of wives is so cordially detested by a large majority of working-class husbands.

It is a domestic duty to make clothes for oneself and one's children, but if by making clothes for other people and their children —*e.g.* babies' hoods or ladies' blouses—a woman can earn enough with which to purchase ready-made suits for her boys, frocks and pinafores for her girls, and gowns for herself, she is equally performing a domestic duty.

The Elasticity of Hours in Home Work

So long as married women and widows *have to* work for family maintenance, it stands to reason that they will as far as possible consult their own convenience in their methods of work. For them, as for us all, the aim is to do labour in the way that will bring in the largest possible return and involve the least physical wear and tear.

Now, large numbers of women seem to think that they realise these ends best when they work in their own homes. They will tell you (1) *that this involves less strain and rush, and* (2) *that it pays them best.*

As regards the less strain, this is chiefly due to the greater

[6] Mr. Hobson, M.A., lecturing at South Place Chapel, Finsbury, January 21st, 1894, seemed to think that women who clamour to have housekeeping recognised as work for which payment should be made take a low estimate of the highest work of the world, the building up of family life. But it is an open question whether there is anything more degrading in working for a fixed sum than for a variable payment in kind, which is clearly what every woman does who marries for a home.

elasticity of hours permitted in home work. Even were there no clauses in the Factory Acts prescribing that women's work in factories should go on within stated limits of time, and fixing the hours at which their meals must be taken, the conditions of employment outside the home would still exact a greater regularity of hours than would suit the needs of the married.

The circumstances of most women's lives do not lend themselves to their work being put into any particular ten of the twenty-four hours. Their moment for beginning and their moment for ending work are both determined by something outside the work altogether —by all the multitudinous claims of husband, children, and other dependents upon their services.

Look only at the extreme variability in women's hours of starting work which springs out of varying meal hours.[7] 'I'm always up to cook him summat 'ot for his supper,' said the wife of a night cabman to me one day. As her husband never returned before 2 or 3 A.M., it is clear her hour of rising would be late, and that work in her case (she was a tailoress) could not well begin before ten.

In the laundry trade, where there is a larger proportion of married and widowed women than in almost any other calling, the need of letting the married woman start later than the single woman is practically recognised, for in many laundries it is the rule for the married women to come in an hour after the single. This concession has been wrung from the employer by the persistence of the married women in coming late. Where the concession is not made, complaints are constant that the women will not come to time. Amongst charwomen, too, as every housekeeper knows, the practice of not arriving before nine is a growing one.

It may be urged that the greater elasticity of hours permitted by home work is not the advantage it appears, that freedom to do work any time of the day or night may resolve itself into compulsion to sit at work all day and half the night, and that maternal and household cares may thus be as much neglected by mothers who work at home as by mothers who leave their homes.

It would be idle to say there is nothing in this view of the question. Vast numbers of home workers do indeed toil very long hours, and many complain of the pressure put upon them by their employers. One woman assured me that if her work did not go in to time, she would receive a telegram asking for it, and the cost of the same would be deducted from her week's earnings. Another, a

[7] The wife of a railway *employé* who goes to work at 4.30 A.M. every morning has to get a supper-tea ready for him at 3 P.M. The meals of postmen have to be taken at every conceivable hour. Thus, a provincial postman has cocoa and bread and butter at five in the morning—making the cocoa himself over a spirit lamp. At nine he comes in to breakfast of bacon and eggs, which his mother cooks for him, goes out at twelve, and comes back at three, when he has his dinner. The wives of many of the men employed in London gas-works regularly take their meals to them.

tailoress, said that when a mourning order came in she would get a postcard the last thing telling her to fetch the work at nine next morning, and would be expected to get it done by nine the following day. Such an order might comprise three pairs of trousers for a father and two sons, and she would sometimes sit up all night. A third woman, telling me that on account of failing health she meant to give up her work, said that her employer was not content for her to do as much work as she could manage by giving a few hours a day to it, but was always posting her material one day and expecting the work done the next morning.

On the whole, though, long hours of work are generally due not to anything in methods of home work, but to workers being necessitous. Thus, the woman just referred to, had a half-blind husband and four children to keep, and she knew that if her employer refused to complete the order in the time desired by the customers, the work would go elsewhere. Now, so long as women are willing to sit up all night to finish work because it is the first job they have had that week and their children want food, so long will the hardship of having on occasions to work when they need to rest be as nothing to the hardship of having to sit idle when they need to work.

If proof were wanting that work in the home will always be preferred by hosts of women to work outside the home, it would be furnished by the recent failure of a well-intentioned scheme set on foot by Mr. W. H. Wilkins. Impressed with the evil of work going on in living and even sleeping rooms, he and the Rev. W. Davis opened lately a Parochial Out-workers' Room in Bethnal Green, and urged home workers to profit by its superior warmth, light, and air. Doubting the utility of the scheme, I wrote to Mr. Davis to inquire into its results. The following was his answer:

> Our out-workers' room was closed last Saturday. It was so ill attended that I did not feel justified in continuing it. A few women came, but very few. The experiment has once again proved the truth of what we so often feel—viz. that of all people, poor women are the most difficult to help, inasmuch as they will not play up to help themselves.

But clearly, the well-meant scheme did not supply a need. The need actually felt is one that is perfectly met by women working in their own homes. Could they leave these for an out-workers' room, they could equally leave them for workshops and factories, and it is certain would prefer this last alternative. They do not wish to leave their homes, not only because they can work there for longer and other hours than those possible in factories, but for the further reason that under the system of working at home they get opportunities for contemporaneous money-making in various directions.

Therefore, even if it were true, as is so often alleged, that the rates

of pay under such circumstances are lower than those obtaining in factories, it would yet be to their interests to work in their own homes.

Is Home Work Badly Paid?

But this brings us to the whole question of payment for home work, and to the consideration of the problem whether home work is badly paid, or at least worse paid than similar work done in factories.

Now, whether a woman is well paid or not depends, of course, on the amount of her wages, the length of her hours, the intensity of her toil during those hours, the healthy or unhealthy nature of her occupation, and the way in which the method of her work suits the circumstances of her life—the way, for instance, in which it permits of additional forms of money-making or leads to something better.

It is because a woman's industrial position does not get truly indicated by a mere bald statement about wages that we should receive all such statements with caution. Accurate enough in themselves, they are too often misleading and sensational in their implications, and newspapers which circulate them in ways calculated to give form and substance to the false implications are much to be condemned.

Illusory Cases of Low Pay

Too often the elementary precaution of discriminating between low rates of pay and small total earnings is disregarded.

Only a little while back a considerable section of the Press was busy with the case of a woman who had stated in court that she was paid a penny apiece for 'making' fashionable mantles. Sensational headings on posters met one's eye at every turn. 'Five-guinea mantles for one penny,' or, more concisely, 'Penny mantles!'—a row of horrified exclamation-marks filling up the line and suggesting a world of condemnation. Comment on the supposed iniquity of the middleman and on the opportunities which home work affords of grinding the faces of the poor were numerous and vigorous.

Then the representative of an enterprising paper interviewed the woman herself, when it came out that what she was paid a penny for was machining the back, shoulder seams, and frills of those capes which were in vogue in 1892. On her own showing she could machine forty and fifty of these capes a day, and had sometimes earned 30*s.* a week. The employer, moreover, on being also interviewed, asserted that for the past month or so she had never earned less than from 22*s.* to 29*s.* a week. These statements, if true, effectually disposed of the charge of starvation wages.

Low Wages and Low Degree of Skill

Putting aside such illusory cases of low wages as these, we certainly find innumerable instances where the total earnings at a given home industry are low in the extreme. But we find, too, that often the labour is really not *worth* more than is paid for it.

The fact that a good deal of work goes on to very little pay is not in itself a proof that there is sweating on the one side or underselling on the other. Every depth of inefficiency is reached by some home workers, and every economic disadvantage weighs upon them. Sometimes a dying trade, as we find with the women working at hand-wrought nails in the Black Country, at straw-plaiting in Bedfordshire, or at hand-sewn gloving in the Western Counties; sometimes husbands irregularly employed, such as the casual labourers whose wives make coarse shirts for 1½*d.* an hour; sometimes husbands regularly employed but poorly paid, like the agricultural labourers of Essex, whose wives are glad to finish trousers for a few shillings a week.

All such economic disadvantages mean scanty nourishment and no apprenticeship to any profitable trade for the girls of the family, and consequently poor stamina and inability to work well or quickly.

Cases where Lower Pay goes with Greater Gain

Finally, we come to cases where work is undeniably paid at very low rates. Such work, arduous in its nature and requiring skill, may bring in less than is got for some other kind of work involving no greater strain and requiring no greater skill, and differing only in the fact that it cannot be carried on in the home.

Yet, even so, we must not jump to the conclusion that the hardness of the home-worker's lot is in exact proportion to the smallness of her pay.

The smaller sum earned by her in her home may really place her in as good a pecuniary position as if she earned a larger sum in the factory.

As I have already pointed out,[8] the unequal pay is, to her, equivalent gain, because of the opportunities she has in her home of making money in other directions. She can take in a 'single man' lodger, 'mind' a neighbour's baby, or let a couple of rooms, and yet work at some trade such as bag or box making, button-holing, and the like.

Say she earns only 4*s.* to 5*s.* 6*d.* by her trade, makes a couple of shillings out of her lodger, and is paid 3*s.* a week for the neighbour's baby, is she not every whit as well off as the woman who earns 10*s.* in a factory, but is not able to 'do for a lodger,' and has to pay 3*s.* for having her baby minded? 'I tried working inside, but it worn't

[8] In a paper read before Section F of the British Association, 1893.

no good,' said an East End working woman to me; 'your place ain't your own when you are out of it all day.' This woman, when I last saw her, took in one lodger, minded two babies, and worked at putting wire and lace goffering round fancy straw hats. 'Why don't I work inside?' said another woman (she had charge of a widowed brother's child and kept house for a younger brother): 'well, if I did, I should have to put out the washing and pay some one to look after the boy.'

Do Home Workers Undersell the Inside (Factory) Hands?

While it is evident that home work is advantageous to the women carrying it on, the question arises, Is it not positively disadvantageous to those other women with whose work in factories and workshops it competes?

Unquestionably the married woman, with her varied resources for making something here, and something there, and a husband in good work, can afford to accept lower pay than the isolated single woman wholly dependent on her one trade for her living. She *can* drag down the level of pay, but the question is, *does* she?[9] Miss Collet says No, and my experience fully confirms hers. It is the desperate eagerness of the necessitous women with young children, aged parents, or sick husbands, who drag down wages. It is the unskilled worker with nothing to fall back upon, trying to support herself out of a manufacturing process so simple that any nimble-fingered child can pick it up, who competes most fiercely for work and is soonest forced into accepting an abatement.

'I never have worked for no cutting-down price, nor ever will,' I have been assured over and over again by many an independent outspoken working-man's wife. 'I ain't got no call to work, and as long as my old man can keep me, I don't intend to work for nothink, and 6*d.* a dozen for these 'ere *is* nothink, me findin' my own thread.'[10]

The charge, then, that the married women with husbands to help keep them bring down wages by direct underselling is not substantiated by fact. The charge that the whole body of home workers, married and single, brings down the level of pay for inside workers is more difficult to disprove.

[9] The evidence collected by the Lady Labour Commissioners brings out very clearly—(1) the prevalent belief that married women do undersell, (2) that no evidence of such a practice is forthcoming.

[10] The testimony of the manager of a firm of mantle-makers given by one of the Lady Assistant Commissioners is strikingly corroborative. 'He never employed people who only wanted to add to their income—he preferred people who wanted to earn good wages. The "pocket money" people were the most tiresome of all; they always considered themselves unfairly and impolitely treated by the forewomen, and were sure that their work was beautiful.'

It is alleged that home workers as a class receive less than inside workers, that even when ostensibly paid at the same rates, and kept equally supplied with work, this is not the same thing, because they provide their cotton, silk, find sewing-machine, paste, glue, shears, or some one or more of the essentials for work.

When it is objected that in some firms the inside workers are subjected to deductions for power, thread, needles, &c., with the avowed object of equalising the rates of pay to indoor and outdoor workers, and that the rent of the home—having equally to be paid whether work goes on in it or not—cannot fairly be deemed a charge on the worker, the ground is shifted. It is, then, contended that even if home workers abstained from all direct or indirect underselling, and even if they were recouped for all out-of-pocket expenditure, their mere presence in the labour market, increasing as it does the already large number of competitors for whatever work is open to women, would reduce wages. If the actual rate did not fall, the total earnings of women would still be diminished. Each woman would get a smaller share of the work to be done than if all available work were distributed amongst a number made less by the withdrawal of wage-earning wives.

To those who imagine the work of the world is a fixed quantity, and that additional workers never create—as, of course, they do—an additional fund from which their remuneration can be derived, this sounds plausible enough. But even they must perceive that withdrawing married women from the labour market in the sense of forbidding them to work for wages inside or outside the home does not necessarily mean withdrawing them from competition with labour in the sense of making them sit with hands folded. Even they can conceive that if industrial wives are denied money-*making* work, the money-*saving* work they will at once attempt will equally leave less work to be done by other women—and even by men.

The prohibition of wage-earning for married workers would not relegate them to idleness or even to work hitherto left undone.

Partially maintained wives—and most working-class wives, I repeat, are only partially maintained—have to provide the rest of their maintenance, and if they may not *make* money, they simply have to *save* money.

The economic result of the two processes is almost identical.[11]

This truth, indeed, is recognised at times by the working men themselves when they allege that there is only fourpence a day difference between the woman who goes out to work and the woman who stays at home, and the woman who stays at home gets it.

[11] 'You make any money?' he inquired.

She glanced at him quickly, but there was not any irony in tone or expression, it was accidental.

'Yes—by saving. I made this dress, I trimmed this hat, I tatted this lace.'—*Battle in Crackerdom.*

Identity of the Money-saving and the Money-making Process

But to demonstrate clearly that the money-*saving* process is economically similar, though not economically superior, to the money-*making* process, we have only to realise some of the domestic arrangements in a working-class family. Constantly we find many of the women's duties of washing, cleaning, and cooking performed for her by some old woman, either her own or her husband's mother, who, past more lucrative work, earns at least part of her keep in this fashion, supplementing it further by doing odd jobs for strangers of the same class. In the meanwhile, the wife, left free to work at a trade for several hours in the day, earns more than will cover the cost of the old woman's board and lodging.

Sometimes, instead of an old mother, a daughter, who would otherwise be put to work outside the home, is kept at home, where under the house-mother's supervision she can look after the last new baby. Where the mother happens to be a skilled workwoman, capable of earning from 12*s.* to 15*s.* a week, and the girl has no special skill or aptitude, the wisdom of such an arrangement is obvious. The average untrained girl of fifteen earns at most 7*s.*, but more generally 5*s.*, a week. It is distinctly better from the point of view of the whole family to do without the girl's 5*s.* and permit the mother to earn the larger sum.

Where neither mother, daughters, nor aged relations are available, poorer neighbours living in the same house or close by are extensively utilised. Particularly are they called in to do the washing.

I was struck, when recently conducting an investigation into laundry work, by the number of working-class women, both married and single, who put out their washing.[12] In one instance the customers of a shop laundry were found to be almost exclusively tailoresses and boot-closers. It paid them better in the season to be at some expense for their washing than to take half a day from their trade in order to do it for themselves.

Not only have many working-men's wives ceased to do their washing, they have also lost the habit of making their own and their children's clothes. Nowadays they either buy cheap ready-made things or still cheaper second-hand garments; philanthropy having encouraged this new departure by the extensive 'Jumble Sales' it organises in every parish.

[12] *Report of an Inquiry into the Condition of Women's Work in Laundries conducted for the Women's Industrial Defence Committee*, by Ada Heather-Bigg, Helen Ogle Moore, and Jean Greive.

Abolition of Home Work would not mean Withdrawal of Workers from the Labour Market

Say now that home work could be abolished,[13] the net result would be this: *There would be no withdrawal of workers from the labour market, there would simply be a change in the class of workers seeking employment in its lowest ranks.*

Certain competitors in the higher grades of labour would be withdrawn, and the whole host of doorstep-cleaners, washerwomen, odd job women, aged mothers and other dependents would be forced into still lower depths of the miserable struggle for existence. The whilom tailoresses, boot-closers, &c., would now do their own washing, make their own clothes, scrub their own flights of steps, look after their own babies, and—which is a point to be carefully borne in mind—*would have less money to expend than heretofore*; while the class which had hitherto performed these offices would wage a hopeless fight with competition amongst themselves, made fiercer by the falling off in the demand for their services. For it needs not to be said that few of this last class would be able to do the work of the displaced tailoresses, boot-closers, dressmakers, &c., though some might make their way into those branches of the trade which exacted the minimum of skill. The effect, indeed, upon their earning power would be precisely the same as though there had been a large influx of workers into their ranks. While, as to the factory and workshop hands in the tailoring and other trades in which home work had before prevailed but was now abolished, they would not gain, as it is often declared they would. The gain to them in any rise of wages consequent upon restriction of their numbers would be qualified by the following circumstances:—

1. The demand for all objects of general consumption produced by them diminishing in consequence of the lessened means of the home workers; this would mean a diminished need for workers to produce such goods.

2. The support of their old, sickly, and temporarily unfortunate would fall more heavily upon them than it had hitherto done. The abolition of home work having made it more difficult for these semi-dependent persons to eke out existence by rendering services to the home workers, their claim on their belongings would be correspondingly increased.

[13] This is an aim openly avowed by many of those who urge restrictions being put upon home work. 'You miss the whole point of the case,' said Miss Tuckwell, of the Women's Trade Union League, in an interview detailed in the *Daily Graphic* on the 12th of July, 1894. 'Our ultimate aim is to get the work out of the home altogether. If the giver out of work found himself so widely and deeply responsible he would cease to give out wc k.'

Home Work alleged to be detrimental to the Community

Careful investigation, then, results in showing that home work is advantageous to the worker herself, and harmless to the outside worker with whose toil in factories hers competes. But even so evils to the community generally are declared to follow from home work. To its account are attributed—

1. Neglect of children and consequent high rate of infant mortality.
2. Loss of comfort in homes.
3. Creation of a lazy, loafing manhood.
4. Spread of infectious disease.

This last is the gravest of all the charges brought against home work: first, because in the absence of precautions, the home system of manufacture would undoubtedly be a potent means of communicating disease; second, because the slightest suggestion of a danger of the kind calls up all our selfish fears to exaggerate its extent.

From the hysterical cries constantly raised, few people would imagine that existing law as embodied in the Public Health Act, the Notification of Infectious Disease Act, &c., provides as elaborate and adequate a series of safeguards against the spread of disease in this particular fashion as any that legislation could devise.

If it be true that all these admirable laws get evaded, there is small justification for supposing that laws prohibiting or regulating home work would stand any better chance of being enforced.[14]

The danger, then, of disease being disseminated through work done in houses is grossly exaggerated; while if we consider this danger not absolutely but relatively, we see that it is vastly less than other risks we run.

Amongst agencies for spreading disease must be reckoned visits of our servants to their homes, homes which are just such places as are accused of being centres of infection; seats in public parks, which rest the wearied limbs of the unclean tramp one moment and are clambered over by the child of the wealthy classes the next; money, which changes hands perpetually, so that sixpence clutched in the early morning in the bare palm of some little child sent out to buy a

[14] The fact of work going on in a home is far more easily concealed than is the fact of illness. In the last case a natural desire for medical aid, and a natural fear of losing those dear to one, involve recourse to the doctor, when notification of the disease to the proper authorities follows, and measures for promptly disinfecting work and workers are taken. And this is to be remembered. It is precisely where the danger to the community would be greatest that the chance of evasion is slightest. The stock instance used to scare the public with is the case of a mother with several children down with fever, whom she covers up at night with the garments on which she has worked all day. But where there are many children some at least will be of school age, and the School Board Visitor is swift to find out what illness keeps any of them from school.

skein of silk for its tailoring mother will glide at noon from the dainty finger tips of a patrician dame into the open grasp of a carefully guarded son and heir clamorous for a new toy.

Nor can the charwoman be forgotten, who comes weekly into many modest households, periodically into most, and whose well-worn dress may equally have lain over the shivering limbs of a child sick with fever. In fact, this is a far more likely contingency than that goods upon which a woman is working should be utilised in this fashion. The dread of crumpling or soiling these, and being fined or deprived of future employment in consequence, would sufficiently deter her from making bedclothes of her work.

When we consider the vast amount of possible risk we are exposed to and escape, we may well regard all sensational details about this or that specific danger with level-headed equanimity. If, on the one hand, we are appalled by hearing a medical expert declare that 'the dust, filth, and dirt accumulated in sweating dens contain the germs of prevailing infectious diseases,' and that 'all clothing manufactured in these shops may transmit such germs to persons who handle or wear it,' we ought to be equally appalled when another medical man assures us that the sweepings of railway carriages reveal similarly germs of diphtheria and tuberculosis.

It is clear that, if all the dangers to health which alarmists say accompany home work did indeed accompany it, we ought to be able as constantly to trace outbreaks of diseases to the conditions under which goods are manufactured as diphtheria to the milk supply and typhoid fever to a drain leakage.

Above all, the 'takers in' of work, who must have the very complete handling of goods when they first leave the workers' homes, would have to be constantly on the sick list.

A Working Wife—a Lazy Husband

The remaining indictments can be dealt with briefly. Nothing is commoner than to be assured that a working wife makes a lazy husband. But this is putting the horse at the tail of the cart with a vengeance. As long as there are self-indulgent drunkards or idle, fibreless men, in the world, the women who have the misfortune to be mated to them will need to earn a living. Were all opportunities of doing so easily in their homes taken from them, and were all employment of married women in factories prohibited, the man's moral character would suffer no transformation.[15] There would still be charing, the streets, crime, and promiscuous charity, to which women could be driven by the sight of their starving children.

[15] 'I could bring many instances myself where, whether women work or not, the men will not work, and if they were all clemmed they wouldn't work . . . The

It is futile to say that a man not ashamed to live on his wife's honest toil would yet shrink from living on the proceeds of her vicious or immoral courses—that her working gives him an excuse for idleness which he can take without self-degradation. Disreputable 'ne'er-do-weels' can frame excuses for misdoings out of everything, and, if these excuses were conclusive, Trades Unionism itself could be shown to be responsible for a vast amount of loafing and laziness. For a man who idles while his wife toils is generally considered a poor-spirited creature. But if he loafs on the ground that he will 'walk the streets till he drops afore he'll work for less nor Union rates and drag down wages for other men,' this excuse throws a glamour of self-sacrifice over his incorrigible laziness, and wins applause even from his deluded wife.

Comfortless Homes and Neglected Children

This objection is constantly caught up by people who have never systematically studied the cause of comfortless homes and the reasons for out-work. Where such work is resorted to because of extreme poverty or drunken betting husbands, all possible discomfort and squalor will generally accompany it. But it is the poverty, not the work mitigating it, which is at the bottom of the mischief. It is the one-room homes, with their over-prolific mothers and swarming broods of fretful ailing children, which banish comfort.

Where home work is the outcome of a thrifty couple's higher conception of the standard of comfort to be attained by themselves and their family, homes do not suffer.

Of many such can be said truthfully what a woman once remarked apologetically to me of her work: 'It's littery, miss, but it ain't dirty.' Superficial disorder will be apparent, but the essentials of comfort will not be lacking.

Of course we all know it is more consonant with many people's prejudices that clean-faced children in neatly patched rags should be gathered round a well-scoured table to dine off a meagre half-slice of bread. But physiologically the children will be better off if their home and clothes be less neat and their nourishment more sufficient.[16]

In the same way it may be true that a mother cannot adequately attend to an ailing child if she has a job of tailoring to finish; but it

women have tried it for month after month, and have not gone to work till the children had scarcely a rag to put on.' Evidence of Mrs. Wood, Power Loom Weaver, *Factory and Workshops Commission*, 1875, p. 647.

[16] I questioned an East End schoolmistress as to the well-being of children drawn from—(1) homes in which an annual baby precluded much work, (2) homes in which work went on, (3) homes where the women went out to work. The most neglected children, she said, came from (3); those from (2) and (1) were on a par as regarded cleanliness and care taken of them; but those from (2) were better fed and clothed.

is even more true that if she secures seven or eight shillings a week by tailoring, her child will be better fed, and therefore less likely to ail.[17]

Conclusion: No Case against Home Work

The case against home work, then, breaks down in every particular.

Home work is not a method of employment forced upon reluctant men and women by bloated capitalists and greedy landlords. It is simply the easiest and most profitable way in which wives and mothers can contribute their share to family maintenance.

Professor Lombroso's theory declares that the work of one sex is sufficient for the support of both sexes—that there is room for only one sex in the field of production. History gives the lie to this assumption. All single women belonging to the working class, and a large proportion of married women, have had at all times to work for partial if not complete maintenance. Such objection to home work, then, as is based upon a dislike to wage-earning wives is most unreasonable. Equally unreasonable is it to attribute to home work the excessive hours, starvation wages, and insanitary conditions which are found with it. The low wages of home workers often mean low degree of skill. The long hours mean the extremes of poverty due to sickness, misfortune, and a minimum of money-earning capacity on the part of husbands and wives.

It pays a woman better to take poorly remunerated work to do in her own home, where she enjoys various other opportunities of turning an honest penny, than to earn higher wages at work outside her home and lose these additional sources of income. This being so, married women could quite easily undersell the single woman in factory or workshop. There is not the slightest proof, however, that they do. The women who undersell do so by reason of exceptional disabilities —large families and sick, or worthless husbands—not by reason of exceptional advantages. The married woman's need to work being what it is, the unmarried worker has not the slightest right to object to her presence in the labour market. Competition with her can be avoided by the simple expedient of not thronging into industries exposed to the concentrated competition of home workers. The single woman's superior mobility can be set against the married woman's advantage of being only partly dependent on her trade. Any attempt to drive out the married worker by the prohibition of home industries would only change the character of her competition, not lessen it. Money-saving work would be substituted for money-earning on her part, and the economic result, as far as other women workers are concerned, would be the same.

The actual evils of home work can be minimised by a careful enforcement of sanitary laws, by increased technical education for

[17] As to infant mortality, this is admittedly highest where mothers go out to work.

the girls of the working class, by dissuading those who can easily go out to work from working in their homes, and by utilising and remodelling various existing organisations amongst women, so as to make them effective in the improvement of woman's industrial conditions.[18]

ADA HEATHER-BIGG.

[18] The difficulties in the way of Women's Trade Combination are great, but the first step towards this goal is taken, as Miss Orme points out, when any organisation draws women together and creates some sort of public spirit amongst them. The multiplication of clubs for adult working women, similar to those opened lately by the Countess Cadogan in Bethnal Green and by Miss J. Boucherett in the West End, is fruitful in possibilities.

RECENT SCIENCE

I

THERE is no doubt that diphtheria has lately attained an alarming frequency in Europe. To say nothing of Russia, where the last epidemics had swept away nearly all children in many villages, we find that in Prussia no less than one-sixth to one-fourth part of all children dying in the age of from one to five years succumb to diphtheria;[1] and the same proportion must have lately prevailed in Western Europe as well. One fully understands, therefore, the keen interest which is taken at this moment by the general public in the experiments of the French doctors Roux and Yersin, who try to cure diphtheria by means of the blood serum of animals previously vaccinated against that disease. However, the scientific importance of these experiments is even greater than their immediate utilitarian value. Serum-therapy has a direct bearing upon nearly all infectious diseases; and it touches upon some of the most burning questions relative to the fundamental problems of life; while the manner in which the researches have been conducted is such that there is hardly, in the whole domain of modern science, another branch which could better illustrate the best methods of scientific investigation applied to a most complicated subject, or better contribute to the general promotion of scientific methods of thought.

That diphtheria, like tetanus (or lockjaw), with which it has much in common, or like anthrax, cholera, malaria, and so on, is due to an infection of the body by special bacteria is by this time an established fact. Without an infection by either the bacteria discovered by Löffler, or the poisons which they secrete, there is no diphtheria. But it is also known that the powers of different animal species, and even of different individuals, to resist infection vary a great deal, and that they can be weakened or increased by vaccination, so as even to confer full immunity. This being true of nearly all infections, the attention of bacteriologists is chiefly directed now towards finding out what is the cause of the poison-resisting powers of the organism, how they are acquired, and how to strengthen them.

[1] Professor Behring, *Die Geschichte der Diphtherie, mit besonderer Berücksichtigung der Immunitätslehre*, Leipzig, 1893.

Two years ago E. Metchnikoff's ingenious theory of immunity was analysed in this Review.[2] According to this theory, the organism which has been successful in its struggle against infection owes its recovery to a victory which has been won by its amœba-like white cells, or leucocytes, over the infecting microbes. As soon as poisonous bacteria are introduced into the animal body, the free white cells—i.e. the white corpuscles of the blood and the lymph, and the so-called wandering cells—probably attracted by the secretions of the bacteria, gather in immense numbers at the spot of infection. There they wage a war to the intruders. If they are healthy and numerous, and if the bacteria do not multiply too rapidly, so as to overpower the leucocytes in numbers, the latter absorb the microbes, enveloping them with their protoplasm and rendering them inoffensive. In some cases the leucocytes actually digest the microbes—that is, dissolve them and absorb them—thus fully deserving the name of microbe-eaters or phagocytes; in other cases they simply keep them enveloped in their protoplasm, and, without killing them, prevent them from casting spores and multiplying; or else, as it would appear from some recent researches, they carry them away to the liver, the lungs, and partly the spleen, where the intruders gradually decay. Wonderful as these statements are, they are facts and not theories. The leucocytes really come together in their millions at the infected spots, hastening thereto from all parts of the body;[3] and hundreds of microscopical preparations, showing to the eye how the leucocytes envelop the microbes with their protoplasm, have been made in the laboratories; many of them have been figured in the works upon the subject.[4] Consequently, the reality of the absorption of the microbes by the leucocytes (the 'phagocytosis') is now generally recognised, and the importance only of this struggle between two sets of cells, as compared with other possible means of protection against infection, is now under discussion.

Other agencies, besides the leucocytes, most probably intervene, and during the last few years a great deal of attention has been given to these agencies. It has become evident that the action of bacteria is very complicated. In some cases the poisoning bacteria must be associated with various species of other micro-organisms, inoffensive in themselves, but probably required to prepare some favourable conditions for the multiplication and the deadly action of the former. Without the aid of their associates the poisoning bacteria may have no effect, as has been proved several times with cholera and typhoid

[2] 'Recent Science,' *Nineteenth Century*, August 1892.

[3] Their disappearance from the blood immediately after infection has lately been confirmed by several explorers.

[4] We are glad to state that Metchnikoff's *Leçons sur la pathologie comparée de l'inflammation* has by this time been translated into English by T. A. Starling and E. H. Starling. Notwithstanding its rather technical title, the reading of this little and suggestive book can safely be recommended to non-specialists.

fever, and is well known for tetanus bacilli. Again, the bacteria may simply destroy some cells of the body—this is the way of the malaria parasites, which destroy the red corpuscles of our blood[5]—or they may attack the tissues of some special organs; or they will deprive the cells of the body of the plastic elements, or gases, necessary for their life, and, so to say, starve or suffocate them. But their effect may also be more indirect; they develop, also, what we call, for want of a better knowledge of the subject, some poisons—some living, ferment-like 'toxines'—which affect the fluids of the body, and especially its blood, and, through it, the whole organism. Since Koch discovered his 'tuberculin,' these poisonous products of the bacteria have been studied a great deal; and, although we are very far from a somewhat precise knowledge of their nature, we know, nevertheless, that most 'toxines,' although deprived by filtration of all bacteria and bacteria spores, exert upon the animal body the same deadly effects as the bacteria themselves—they provoke the same disease.[6] And, finally, there is in the animal body another class of ferment-like albumoses, also very imperfectly known, which also develop out of the activity of bacteria, and which seem to meet in the body the effects of the above poisons. The *British Medical Journal* has proposed for them the very good name of 'defensive proteids.'[7] These 'anti-toxines,' whatever their nature may be, undoubtedly develop in the blood, and especially in the serum of animals which have caught certain infectious diseases and have recovered from them; and, consequently, another—that is, a fourth—branch of research has grown up, the explorers of which want to know whether blood altogether, and especially its serum, as well as other liquids secreted by the body, and especially milk, do not possess immunity-conferring, or even curative, properties. This is the branch of bacteriology which interests us most at the present moment, especially as regards the applications of blood serum to the cure of diphtheria.[8]

[5] For all concerning the malaria microbes see the excellent work of Dr. Julius Mannaberg, *Die Malaria-Parasiten, auf Grund fremder und eigener Erfahrung dargestellt*, Vienna, 1893.

[6] Besides the researches of Koch and his school into the properties of tuberculin, a wide number of works ought to be named under this head. Such are the studies undertaken by Roux and Widal (at the Institut Pasteur), and Wooldridge in 1888, into the poisons secreted by the diphtheria and the tetanus bacteria; the investigations of Brieger and Fränkel into the poisonous albumines ('toxalbumines'); and those of E. H. Hankin, Kanthack, and Dr. Sydney Martin into the 'toxines' and the protective 'anti-toxines.'

[7] See E. H. Hankin's 'Report on the Conflict between the Organism and the Microbe' in *British Medical Journal*, July 12, 1890; also his review of Behring and Kitasato's work in *Nature*, December 11, 1890, xliii. 121. Indications of the corresponding literature are given in both papers.

[8] Its literature is immense. Indications relative to it will be found in the quoted works and reviews. Buchner's reports to the Hygienic Congresses at London (1891) and Buda-Pesth (this year) are excellent reviews of the whole question, the more so as Buchner is one of the chief workers in this branch.

For many years past Doctors Richet, Héricourt, and Klein, amidst general indifference, have advocated the use of the watery parts of blood—the serum—as a means of protecting animals against infection, and insisted upon its curative properties. However, their opinions passed unnoticed. All that preparatory work concerning the bacterial poisons and the anti-toxines which has just been mentioned had to be done before the importance of the serum could be properly understood and demonstrated. It was therefore only at the end of 1890, when the German doctor Behring and the Japanese bacteriologist Kitasato published the results of their elaborated researches, that the whole matter was put on a firm scientific basis.[9] Modern serum-therapy, as acknowledged over and over again by Roux and all other explorers, dates from these memoirs.

The development of Behring's ideas is extremely interesting, and it admirably illustrates the present aspects of bacteriological research. Rats, as is known, are resistent to several infective diseases, including anthrax. While mice, rabbits, guinea-pigs, sheep, and horned cattle rapidly succumb to an infection of anthrax bacteria; rats do not catch the disease. This was known years ago, and it had also been remarked, in laboratory experiments, that while anthrax bacteria thrive in the serum of the last-named animals they rapidly degenerate in the serum of rats.[10] It was natural, therefore, to suppose that the same takes place in the living organisms, and that the resistance of rats and the susceptibility of mice, rabbits, and so on, are due to the different bacteria-killing properties possessed by the serum in these different species. But experiment, directed this way, refused to support the hypothesis. Animals whose blood showed no bactericide properties in the laboratory were found to be immune against certain diseases; while, on the other hand, animals whose blood destroyed the bacteria in a glass bottle were not always immune. Some experiments were in favour of the hypothesis, but others were dead against it, and there remained nothing but to submit to the verdict, however undesired it was.[11]

These negative results were arrived at at a time when Roux and Yersin, who studied diphtheria, and Kitasato, who worked on tetanus, had succeeded in obtaining, out of the secretions of the respective bacteria, such powerful poisons that it became possible to provoke both

[9] Behring and Kitasato, 'Ueber das Zustandekommen der Diphtherie-Immunität und der Tetanus-Immunität bei Thieren,' in *Deutsche medizinische Wochenschrift*, 1890, 49, p. 1113. Analysed in *Nature* by Mr. Hankin, December 11, 1890, xliii. 121.

[10] I follow in this sketch Behring's own description of the evolution of his ideas, as given in his Introduction to his and Kitasato's memoirs, 'Die Blutserumtherapie bei Diphtherie und Tetanus,' in Koch und Flügge's *Zeitschrift für Hygiene und Infectionskrankheiten*, 1892, xii. 1–10.

[11] A long series of such experiments was made in Bouchard's laboratory; so also by Behring and Nissen.

diseases by injecting the poisons alone, after all bacteria and their spores had been carefully eliminated from the injected matter. Illness and death evidently resulted in such cases, not from some action of bacteria upon the cells of the animal, but from a general poisoning, whatever that poisoning might be. Accordingly, Behring and Kitasato, and several other bacteriologists, at once began to experiment upon such substances as might paralyse the bacterial poisons, even though they might be unable to kill the bacteria themselves. Various chemicals were tried, and for some time great hopes were entertained as to the chemical treatment. But again the results were utterly disappointing. It appeared that the effects of the chemicals are mostly quite local, and that, to be of any use, they must be applied immediately after the infection takes place. Their practical value is therefore extremely limited.[12]

Nevertheless an important point was won by such researches. Behring and Kitasato found, to their astonishment, that if the spread of tetanus in an animal had been stopped by any sort of chemical treatment, the blood of that animal, although it was unable to kill the *bacteria* of tetanus, paralysed the *poisons* evolved by the bacteria. The animal was rendered immune against infection; and when the two doctors attempted to *cure* tetanus by means of the serum of such blood, they at once obtained results which went far beyond their expectations. To quote but one instance: several mice were dying from inoculated tetanus, when an injection of the serum of an immune rabbit was tried upon one of them. Improvement became apparent at once, and it was followed by recovery, while the other mice died in a few hours. The cure for tetanus was thus found, and this was what Behring and Kitasato announced in their epoch-making memoir in December 1890.

But now that the final aim seemed to have been reached, new difficulties arose. The first successes were not always confirmed by subsequent experiments, and, in proportion as the field of research was widened, failures became more and more frequent. Then it was much more difficult to obtain a curative serum for diphtheria cases

[12] The limited effect of chemicals will be better illustrated by the following: Dr. Calmette, the chief of the Bacteriological Institute of Saigon, having once received from a locality infested by cobra snakes a barrel containing fourteen living specimens of the snake, utilised this opportunity for studying the means of combating the deadly poison. He experimented with all sorts of chemicals. It appeared, however, that although permanganate of potassium at once destroys the cobra poison in a glass tube, and precipitates it, it has but little effect in the animal body unless it is introduced into the wound immediately after, or simultaneously with, the inoculation of the poison. Otherwise the latter rapidly spreads through the body, and can be paralysed no more either by the permanganate or by ammonia. Chloride of gold is but a little more efficacious. If the spreading of the poison is slackened by ligatures, and injections of chloride of gold are made all round the wound, and *on the way of the poison from the wound to the central parts of the body*, there are some chances of recovery; but the whole must be done very quickly, in order to prevent the spreading of the poison ('Observations expérimentales du Venin de *Naja tripudians* ou *Cobra capel*,' in *Annales de l'Institut Pasteur*, 1892, vi. 160).

than it was for tetanus. Moreover, large quantities of serum were required for the serum cure, and they could be obtained only by conferring immunity against diphtheria on larger animals very susceptible to diphtheria—a feat which was found by no means easy to accomplish. Happily enough, the two explorers made no secret of their discoveries, so that new and easier methods of vaccination were sought for and discovered, especially by Roux and Yersin.

It would not be possible to relate here the details of these memorable researches.[13] Sufficient to say that gradually the following method was elaborated, and that it proved successful for big animals as well. Instead of introducing a deadly virus, and then trying to cure it by chemicals, an *attenuated* diphtheria (or tetanus) poison was used for vaccination—all bacteria and their spores having been removed by filtration from the vaccinating liquid, and the morbid properties of the poison itself having been reduced by the addition of certain chemicals.[14] This attenuated poison was injected into a quite sound sheep (or horse) in such limited quantities as to obtain but a very feeble reaction of fever; and the injections were repeated until the animal was accustomed, so to say, to the poison, and no more fever was provoked by subsequent injections. Then stronger doses, up to three and six cubic inches of the attenuated poison, were resorted to; and when they also had no marked effect, an injection of the most virulent diphtheria poison, such as would kill outright an untrained sheep, was attempted. If it did not provoke diphtheria, the sheep or horse was considered immune, and the serum of its blood could be used to cure diphtheria in other animals.[15] This method was gradually perfected, and it was discovered by Roux that the serum need not be drawn each time afresh. It may be desiccated, and kept for a long time in such state without losing its properties.

The curative effects of such serum are really wonderful. A guinea-pig usually dies from inoculated diphtheria in thirty-six to forty-eight hours. But an injection of a very small quantity of serum ($\frac{1}{5000}$th part of the weight of the patient), if it be made a quarter of an hour after the inoculation of the poison, prevents the appearance of the disease. If the treatment begins at a later period, say eight hours after the inoculation, ten times more serum is required. Even twenty-four hours after the infection takes place the animal can be saved by an injection of serum attaining $\frac{1}{100}$th part of the animal's weight. Its blood is renewed; it acquires new forces, and it destroys

[13] The reading of the chief original papers, namely, by Behring and Kitasato, in the *Zeitschrift für Hygiene* (1892, xii. 1–81), and by E. Roux and L. Vaillard in the *Annales de l'Institut Pasteur* (February 1893, vii. 64–140), can be recommended to non-specialists as well as others.

[14] Roux prefers iodine, while the German explorers prefer iodine trichloride, or a chloride of gold and sodium. Many other chemicals, including peroxide of hydrogen, were experimented with before these three were chosen.

[15] Behring's *Die Geschichte der Diphtherie*, pp. 160–165.

the poisons of diphtheria which were rapidly bringing the disease to a fatal end.[16] With tetanus, injections of serum are effective even in a more advanced stage.

Moreover, as shown by Kitasato and his colleagues,[17] the same method is applicable to Asiatic cholera, erysipelas, hog-cholera, and anthrax. Immunity at least, or, more correctly, a resistance to poisoning, is easily obtained for these diseases as well; and in cholera immunity is conferred so rapidly—in twenty-four hours—that the treatment has very much the characters of a real cure. A wide field is thus opened for most promising discoveries.

In how far the serum treatment may be relied upon for man is still a question to be solved by experiment, and upon which Roux, Behring, Kitasato, Ehrlich, and all the above-named explorers, as well as Tizzoni and Cattani in Italy, are now busy at work. The brilliant successes announced from time to time in the daily papers must certainly be received with caution. But in view of the undoubted, though not always infallible, successes obtained with animals, and the fair proportion of successful treatment of men, we can be hopeful. In some cases the cures have been most remarkable. Moreover, we learn from statistics which reach us as we write these lines that Roux at Paris has obtained seventy-four per cent. of cures in three hundred ascertained cases of diphtheria, already treated by the serum; and that Professor Ehrlich at Berlin has had eighty-five per cent. of recoveries in the one hundred and sixty-three cases treated by the new method. There were only two failures out of the seventy-two cases in which serum was injected during the first two days of the disease.[18] Such results are more than reassuring.

The theoretical value of these investigations is self-evident. Important points have been won, and new and broader vistas have been opened. Metchnikoff's theory of immunity has certainly not been overthrown by the new discoveries. On the contrary, the part played by the phagocytes in the struggle against infection is fully recognised even by such promoters of the serum theory as Buchner and Roux. It has been proved, moreover, that an injection of an antitoxic serum provokes a marked increase in the numbers of the leucocytes in blood,[19]

[16] Behring and Wernicke, 'Ueber Immunisirung und Heilung von Versuchsthieren bei der Diphtherie,' in *Zeitschrift für Hygiene*, 1892, xii. 10–44; also Behring's *Geschichte der Diphtherie*, p. 184.

[17] S. Kitasato, L. Brieger, and A. Wassermann, 'Ueber Immunität und Giftfestigung,' in *Zeitschrift für Hygiene*, 1892, xii. 137–182. For immunity through milk, P. Ehrlich, in same volume, p. 183, where copious bibliographical indications are given. Kitasato attenuates the bacterial poisons by cultivating the bacteria in preparations obtained from the thymus gland. His researches thus join hands with the most remarkable therapeutic results obtained by Brown-Séquard and D'Arsonval, and they tread upon the ground which has been so well reviewed lately by Professor Schäfer in his presidential address before the British Association at Oxford.

[18] M. A. Ruffer, in *Nature*, November 1, 1894, li. 18.

[19] Roux and Vaillard recognise the fact in the above-quoted memoir, p. 91.

and it appears probable[20] that the leucocytes of a vaccinated animal differ from those of other individuals of the same species in being capable of more rapidly attaining their stage of full development, when they are more active in absorbing microbes. But it also becomes more and more apparent that the phagocyte theory will require some further extension. Perhaps, if the views developed by Héricourt upon infectious disease altogether[21] prevail in science, it will be found that phagocytosis and the struggle between the bacterial poisons and the anti-toxines of the serum correspond to the two different phases which, according to Héricourt, are marked in each infectious disease. But we must first learn what the toxines and the anti-toxines are. Up till now we can only say that they are living matter, and that they must be considered as ferment-like substances; but we do not know what is the reason of their action upon each other, and bacteriologists have not yet succeeded in separating them from each other in the laboratory. Perhaps the modern researches into the structure of the cell, which prove that each cell is a world in itself,[22] will throw some light upon this difficult subject, and some day we may learn that the toxines and the anti-toxines belong to the category of those component self-reproducing elements of the cell which have been named *pangenes* by De Vries.

II

The destructive earthquakes which have lately visited Italy, Greece, Turkey, and Japan have again brought to the front the long since debated question as to the probable origin of those grand trepidations of the soil. Great divergence of opinion undoubtedly prevails still among geologists; but some accord begins also to be established upon the chief points at issue, so that the main features of an earthquake theory can already be delineated.

A really scientific study of earthquakes is of relatively recent origin. It may be said that it dates from the great catastrophe at Naples in 1857, when H. R. Mallet worked out, in his classical report,[23] the methods of investigation of earthquakes, and when Palmieri, establishing his seismometric observatory on the slopes of Vesuvius, attracted general attention to the necessity of special instruments for measuring the movements of the soil. Each earthquake of importance has been carefully investigated since, and the spot, or the line, from which the disturbance originated, as well as the depth at which it lay below the surface, have been carefully determined in each case. In many places the tremors of the soil are now carefully measured and registered by means of special instruments; and although it was

[20] Mademoiselle C. Everard, J. Denmoor, and J. Massart, 'Sur les Modifications des Leucocytes,' in *Annales de l'Institut Pasteur*, 1893, vii. 187–194. See also Metchnikoff's fifth memoir on immunity in the same volume.

[21] *Revue Scientifique*, November 15, 1884, xxxiv. 619.

[22] See 'Recent Science,' in this Review for December 1892, p. 1013.

[23] *Great Neapolitan Earthquake of 1857*, 2 vols. London, 1862.

found very difficult to devise an instrument which would accurately record the movements of the soil, the chief difficulties have gradually been overcome, and the records of our seismometers and seismographs, properly interpreted, give already a good idea of the waves which spread in the soil. As to the delicacy of the modern tools used for detecting the slightest tremors, it is sufficient to say that by means of the new seismometrograph established at the Collegio Romano it was possible to observe at Rome not only the earthquakes which took place in Greece, India, and Turkestan, but also to see, on March 22 last, three distinct waves coming from three distinct shocks in Japan. They had travelled over an enormous distance—nearly one earth-quadrant—at a speed of about 2,750 yards in the second, and yet were visible in the tracings by the instrument. But the new bifilar pendulum devised this year by Mr. Horace Darwin is even still more promising; it can record and measure a tilt of the earth's surface of less than $\frac{1}{3000}$th part of a second [24]—that is, a change of level which would occur if a line one mile long were lifted by one-thousandth part of an inch at one of its extremities. And, finally, direct experiment is now called in to the aid of the young science, and artificial earthquakes having been provoked both by explosions of mines and by the fall of heavy masses of iron, their effects upon delicate instruments have been carefully studied. The tools of the seismologist thus attain a high degree of perfection.

In studying the distribution of earthquakes upon the surface of the globe the annals of all countries have been ransacked, and monumental catalogues have been compiled by H. R. Mallet, Alexis Perrey, and Fuchs, and, quite lately, by Orloff and Mushketoff for Russia and the adjoining lands of Asia. Special centres have also grown up for a detailed study of earthquakes, in South Italy, Greece, and Japan,[25] especially in Japan—the land of earthquakes and earthquake studies—where invaluable data are collected by sending out all over the country scores of thousands of post cards, which are returned every week to the Seismological Institute, with notices of the shocks experienced at each spot.

There is also no lack of investigations relative to the distribution of earthquakes in time, their supposed periodicity, and their possible connection with the seasons of the year, the relative positions of sun and moon, the atmospheric pressure, the electric earth-currents, and so on; and if the expectations of Falb and Perrey, who have tried to predict earthquakes, have not been fulfilled, we may still hope that warnings similar to those which are issued for coal-mine explosions will some day be possible. One fact of importance appears, at any

[24] C. Davison, in *Nature*, July 12, 1894, l. 249.

[25] The *Transactions of the Seismological Society of Japan*, named now *The Seismological Journal of Japan* (edited by J. Milne), are full of the best information relative to earthquakes altogether.

rate, with certainty from these investigations—namely, that earthquakes are decidedly more frequent during the winter months than during the summer, and that their frequency stands in some not ye fully determined connection with atmospheric pressure.[36] Of course this does not mean that cold seasons, or a high atmospheric pressure, or even the supposed tidal action of the sun and the moon upon the elastic earth's crust, may be considered as causes of earthquakes. They must be taken only as additional impulses aiding to break an already unstable equilibrium which originates, according to the now prevailing views, from the dislocations of the strata themselves, chiefly due to aqueous causes.

The study of earthquakes thus stands now on a firm scientific basis. As to their causes, current opinions are undergoing just now a deep modification. The theory of earthquake origin which has till lately prevailed in science, and which had for it the authority of Humboldt and Leopold Buch, is well known. Earthquakes and volcanic eruptions were considered as effects of a common cause, the never-ceasing reaction of the hot and molten interior of the earth upon its thin solid crust. When water, percolating the rocks or running down their fissures, reaches the depths at which the temperature is so high that rocks and metals are maintained in a liquid state, steam is evolved under a formidable pressure, and, together with the gases originated from the molten mass itself, it accumulates in the subterranean cavities. Rows of volcanoes rise along gigantic trends which are opened in the earth's crust, and they act as so many safety-valves for the escape of the gases and steam; but if one of these valves be obstructed for some reason, the pressure of the gases grows, until they open a passage through the solid crust, bringing the rocks into a formidable commotion.

The theory was grand. It brought into causal connection a wide range of volcanic and seismic phenomena; it inspired research. Who does not remember the beautiful lines devoted by Humboldt in his *Cosmos* to this subject? However, even at the time these lines were written the theory was beginning to inspire serious doubts. Was not the cause too grand in comparison with its results? Would not the molten nucleus break the thin crust to atoms if it stood in such free intercourse with the atmosphere? Local hearths of chemical

[36] Sjögren, 'Om jordkorpans sammanpressning under atmosfertrycket,' in *Öfversigt af Vetenskaps Akademiens Förhandlingar*, 1888, ii. 131, has lately promoted the idea that the compression of the strata by high pressure favours the outbursts of subterranean gases. R. Langenbeck holds a similar opinion (in Gerland's *Geographische Abhandlungen aus Elsass-Lothringen*, 1892, Heft i.) Günther (*Beiträge zur Geophysik*, Bd. ii. 70) has lately paid a good deal of attention to the subject, and came to approve of Sjögren's idea (in *Naturwissenschaftliche Rundschau*, ix. 20). For all concerning earthquakes Professor J. Milne's excellent little volume of the 'International Science Series,' and S. Günther's *Lehrbuch der Geophysik* (2 vols. Stuttgart, 1884), will be found trustworthy guides.

activity would do as well to explain volcanic action, and local disturbances in the superficial strata would perfectly well explain the greater number of earthquakes. In fact, when we know that the mere fall of the steam-hammer in Krupp's gun factory shakes the houses and their windows for several miles round;[27] that the explosion of a mine loaded with gunpowder or dynamite is felt many miles off, and that the mere trampling of a holiday crowd is reported to the astronomers of Greenwich by the behaviour of their levels, we feel disinclined to appeal to the molten nucleus, and we look for causes nearer at hand.

Gradually, the very existence of the molten nucleus of our planet became more and more problematic. Already the mathematical investigations of Fourier and Poisson had shown that, owing to our very imperfect knowledge of the physical aspects of the question, we are reduced to mere conjectures as regards the state of the inner parts of our globe.[28] Later on, the admirable investigations of Sir William Thomson, G. H. Darwin, Mellard Reade, Osmond Fisher, R. S. Woodward, and others rendered the existence of a molten nucleus surrounded by a thin solid crust less and less probable. And the geologist had to conclude that, so long as physics would not supply more reliable data for mathematical investigation, he had better leave the question as to the physical state of the inner parts of the earth unsolved, and study the dynamic processes which are going on in the superficial layers of the planet. The more so as the subsidence of strata undermined by water; the disturbances of equilibrium which result from the transport of immense masses of matter by the rivers, and the accumulation of deposits in their deltas; the side pressures so well illustrated by the folding of the strata; the chemical processes which must go on in the rocks at relatively small depths; and the forces originating in the crystallisation of rocks, are agencies largely sufficient to explain both the activity of volcanoes and the most severe subterranean shocks.

Research was accordingly directed towards a study of the local causes which might have given origin to each separate earthquake. There is, of course, a number of earthquakes directly due to volcanic causes; but these, as already indicated by Humboldt, are always limited in their areas and are the minority. As to the greater number, their causes must be sought for in local disturbances of the rocky strata. Everywhere there are softer strata which are disintegrated by water between the rocky layers above and beneath them. One day or the other they must yield; and when they do yield, their subsidence,

[27] The fact had been indicated by Mohr in his *Geschichte der Erde* (Bonn, 1875), which was so much scoffed at at the time of its appearance for its pronounced Neptunist ideas.

[28] For a capital review of the mathematical theories of the earth, see R. S. Woodward's presidential address in *American Journal of Science*, 1889, xxxviii. 337 *seq.*

or the gliding of the upper strata upon a softened intermediate layer, must result in an earthquake. And when the geologist looks for a local cause of an earthquake, he finds that some such disturbance has really taken place. Such was the case in the great Naples catastrophe of 1857; such was again the case in the Irkutsk earthquake of 1861–62, when all information pointed to the delta of the Selenga, where a large area subsided, and 140 square miles of land were covered with the waters of Lake Baikal to a maximum depth of seven feet.[29] The great earthquake of Middle Japan in the year 1891 had again the same character. It was found that a rent was opened in the superficial strata for a length of more than forty miles, and that on one side of the rent the strata had subsided by as much as twenty feet in the places of maximum subsidence. And all indications agreed in pointing to this rent as the line from which the earthquake waves had proceeded, so as to leave no doubt as to the subsidence being the cause, and not the consequence, of the earthquake.[30] Moreover, in this case, as in all others, after the sudden subsidence had provoked several severe shocks, thousands of smaller shocks, proceeding from the same locality, continued to be noticed for a year or so, until a succession of smaller subsidences had brought the displaced mass to a rest. The great earthquakes which affected in April last the north-eastern region of continental Greece had the same character. A great fissure thirty-five miles long was opened, and on one side of the fissure the Plain of Atalante was lowered and slightly shifted towards the north-west;[31] and similar, although submarine, changes of level were observed during the earthquakes which visited Zante and the Gulf of Corinth in 1873, 1886–90, and April 1893.[32]

For almost every great earthquake which has taken place during the last thirty years the cause was found in local dislocations and subsidences. But while our knowledge of the local causes was thus progressing, the part which belongs to earthquakes in the general life of the planet was lost sight of. Some broader generalisations, the necessity of which Humboldt insisted upon, were required, and they were given in the epoch-making work of Suess, *The Face of the Earth*.[33] The 'local dislocation' theory is fully endorsed by Suess; but these dislocations themselves are treated as but separate instances of the activity of those 'tectonic' or building

[29] Orloff and Mushketoff's *Catalogue*, St. Petersburg, 1893.

[30] B. Kotô, 'On the Cause of the Great Earthquake in Middle Japan in the year 1891,' in *Journal of the College of Science*, Tokyo, 1893.

[31] S. A. Papavasiliore, 'On the Earthquake of Locrio of April 1894,' in *Comptes Rendus*, 1894, cxix. 112, 380; analysed in *Nature*, l. 607.

[32] W. G. Forster, in *Mediterranean Naturalist*, April 1893; analysed in *Nature*, April 27, 1893, xlvii. 620.

[33] Ed. Suess, *Das Antlitz der Erde*, 2 vols. Prague, 1885. This work of first importance has not yet been translated into English.

forces which continually re-model the earth's surface, create the abysses of the oceans and the depressions of the continents, and lift up the highest mountains. Starting from the idea that the cooling of the globe results in a steady decrease of its diameter, and consequently in a continuous shrinking and shrivelling of its outer strata, Suess endeavoured to show how this process would work in producing the leading features of the earth's surface. He described how large areas have been, and are still, sinking bodily, producing the great faults which intersect our rocky formations; how semicircular depressions arise on the borders of the highlands; and how the lateral pressures developed during the shrinking of the outer layers result in lateral pressures which fold the strata and lift them into mountain chains. The earthquakes under this broad conception of 'geo-tectonics' appear as simple trepidations of the soil by which the shrinking of the crust and mountain-building processes are necessarily accompanied.

Kant had already remarked that most earthquakes take place on the seaboard. Modern research fully confirms this view, and goes a step further. It maintains that by far the greatest number of earthquakes—perhaps ninety per cent., as Professor Milne says—originate beneath the sea, where the rocks, under the superincumbent hydrostatic pressure, are continuously saturated with moisture, and can the easier be displaced. In fact, in nearly every earthquake in Japan, the centre of disturbance of which could be determined, it was found to lay a short distance off the eastern coast of Nippon. The same is true of the earthquakes which have lately visited Greece, as illustrated by the breakages of submarine cables, which undoubtedly indicate that considerable changes of level have taken place at the bottom of the sea.[34] And the same is true, again, of the Constantinople earthquake of July last, which had its centre of disturbance in the Sea of Marmora, at a short distance from San Stefano.[35] In short, it may be taken as a fact that a great number of earthquakes, to say nothing of the sea-tremors, which also are numerous,[36] originate at the sea-bottom, near the sea-coast.

However, not all sea-coasts are equally liable to be visited by earthquakes. The flat lands of Subarctic Asia, which gradually merge into the shallow Arctic Ocean, are seldom disturbed. A steep slope of the sea-bottom itself, or of an elevated land towards a deep sea, is a necessary condition for both earthquakes and sustained volcanic action. The eastern coasts of the Japanese archipelago, which face the till lately unfathomed abysses of the Northern Pacific, and the

[34] W. G. Forster, 'Earthquake Origin,' in *Transactions of the Seismological Society of Japan*, Yokohama, 1890, xv. 74, 77.

[35] Charles Davison, in *Nature*, September 6, 1894, l. 450.

[36] See E. Rudolph's monograph of the same in Gerland's *Beiträge zur Geophysik*, Stuttgart, 1887, Bd. i. 133.

abrupt slope of the Chilian coast of South America, are well-known instances in point.

The deep depressions of the bottom of the East Mediterranean, where a depth of over 2,000 fathoms is found within twenty miles from the island of Rhodes; the western coast of Southern Greece, facing the 2,170 fathoms deep abyss of the Ionian Sea which separates it from Sicilia; the Neapolitan coast, separated by but a hundred miles from the 2,000 fathoms depth of the Tyrrhenian Sea; and so on—all these facts enable geologists to formulate another law, namely, that steep slopes, either from the land to the sea or of the sea-bottom itself, are another condition for frequent earthquakes.

But even in this form the law would not be complete, as it would not include the disturbed regions of the continents; and it is most remarkable that, when worded accordingly, it applies to continents also. In the very heart of Asia there are two regions where earthquakes are especially frequent, and both of them lie along the steep north-western border of the Great Plateau of Central Asia, where it abruptly falls from the heights of the Tian Shan to Lake Issyk-kul, and from the heights of the Khamar-daban (about 8,500 feet high) to the 750 fathoms deep Lake Baikal. A third depression of the same kind—also a hearth of earthquakes—is situated on the north-east border of the plateau of Persia and Armenia, where the 15,900 feet high Savelan rises over the deepest parts of the Caspian Sea, marked by the 500 fathoms line; while farther west we have the depression of Vienna, lodged between the north-eastern Alps and the north-western Carpathians, which has been so well described by Suess as another centre of earthquakes. Moreover, the three first-named depressions, like the so much disturbed Gulf of Tokyo, or the Bay of Arauco in South America, are semicircular depressions, carved out in the edge of the highlands; and this further confirms the above-mentioned views of Suess.

However, a further step seems to be required in the development of the hypothesis. The most severe earthquakes undoubtedly take place on the borders of high plateaus, whether these plateaus slope towards the ocean, or whether they rise over flat lowlands surrounding them. But all plateaus are fringed by border-ridges, which gently rise over their elevated surfaces all along their edges, as well as on the edges of the separate terraces which are so frequent in the plateaus of Asia and America. This feature is too general to be merely accidental, although it has hitherto remained quite unexplained. It is therefore possible to suppose that the subsidences which take place, chiefly along the borders of the plateaus, must have a double effect—that of lowering the levels of the surrounding lowlands or plains (or of the adjoining sea-bottom), and of lifting up at the same time the tops of the inclined strata; this process, repeated for ages, resulting in the formation of the border-ridges, which are a necessary accompani-

ment to all plateaus of the Old and the New World. And as these border-ridges mostly are, or have been in recent geological times, the seats of intense volcanic activity, we see that earthquakes and mountain-building are thus brought again into connection. But this hypothesis, which I venture to add as a further extension of Suess's views, lands us on a new domain—the origin of mountains—which may be better treated separately on some future occasion.

III

Great hopes have been revived again among aeronauts by the experimental flights of Dr. Lilienthal in Germany, and the partial successes obtained with their flying-machines by Messrs. Maxim and Phillips in this country, and Mr. Hargrave in Australia. For more than a half-century inventors in aeronautics have been treated as foolish dreamers, and no later than two years ago an American professor who wanted to address his students on the subject of mechanical aviation felt it necessary to seriously beg his audience not to interpret his choice of the subject as a token of declining mental faculties. But, happily enough, these dark times are over, and aeronautics is becoming a regular department of scientific research. The general revival of science which we witnessed in the early sixties has given new life to this branch of research, and we have now an excellent scientific literature devoted to the subject, several aeronautic societies (one in Great Britain) which are doing excellent work, and several reviews in the pages of which aeronautics is discussed in a scientific spirit.[37]

The services rendered by balloons during the last Siege of Paris are well known, and since that time steady progress has been achieved both in the mode of construction of balloons and the art of aerial navigation.[38]

By taking advantage of the different directions of wind at different heights, which begin to be better known, and may be ascertained by means of pilot balloons, the navigator to some extent chooses his own direction; and with the new anchors and guide-ropes, landing, which is the most dangerous part of ballooning, has been so much simplified that balloon trips are now as safe as any other kind of sport. For meteorology the balloon is a precious aid, and a good deal has been learned from the aeronauts about temperature and electricity in cloudland; while unmanned balloons, provided with

[37] *L'Aéronaute* is published at Paris since 1869. The *Zeitschrift für Luftschiffahrt und Physik der Atmosphäre* is a sister review to the *Zeitschrift für Meteorologie*, and is published by the German and Austrian Aeronautic Societies. A new review, *The Aëronaut*, has been started this year in America. And so on.

[38] For the technical part of the subject and the succession of invention, see the new book of Mr. Chanute, *Progress in Flying Machines*, New York, 1894. Also his address before the Congress of Aeronautics at Chicago.

self-registering instruments, as has been found by M. Hermite, can bring us down the most precious information from those highest strata of the atmosphere in which Mr. Glaisher nearly lost his life.

The idea of adding a propeller to a balloon, and thus enabling it to navigate close to, or even against, the wind, is certainly not new—Girard had already realised it in 1852—but the practical application of his idea had to contend with many technical difficulties. The deformation of the balloon, which takes place as soon as it begins to progress against the wind instead of being carried with it, had to be prevented; a light but powerful motor had to be devised under the limitation of employing no fire for it; and a number of minor obstacles had to be overcome. Accordingly, although propelled balloons are now the pets of the ministries of war in the big States, and money is freely spent upon them, the advance is still very slow. The greatest speed ever attained by the French officers Renard and Krebs with their cigar-shaped balloon, propelled by a storage-battery motor, was only fourteen miles to the hour. True, that even with this modest speed the balloon could be navigated in a feeble breeze, so as to return to its starting-point, after having described a triangular route; but in order to brave the wind a speed of fifty miles is required, and all that the French officers expect from their new balloon is a speed of twenty-five miles, which will enable it only to take tacks in a moderately fresh breeze.[39] Moreover, there being but little hope of discovering a gas the density of which would be still smaller than that of hydrogen, the dimensions of a propelled balloon must remain very great, in proportion to the useful weight it can carry. The new French balloon (as remarked by Mr. Chanute) will be of the size of a river steamer, and yet it will hardly carry more than four passengers; and a further increase of size would be of little avail, in proportion to the cost of the ship. Consequently, scientific research and invention are now directed more and more towards the flying-machine, which, being much heavier than an equal volume of air, will find in its very density and inertia the means of contending against the currents of air.

We have under our very eyes a most perfect flying-machine—the bird—and we have only to study, from a physical point of view, the laws of its flight, in order to find out the laws which must guide us in our schemes. This is what science has tried to do ever since the time of Leonardo da Vinci. But, owing to a want of interest in such researches in the general public, the scientist had hardly completed his work ere it was forgotten. The wonderful observations and physical reasonings and experiments of Leonardo da Vinci had to be re-discovered a few years ago.[40] Even the admirable work of Borelli,

[39] It is 215 feet long, and 40 feet in diameter. The motor, 45 horse-power, will weigh, with fuel for ten hours, 3,400 pounds.

[40] Amans, 'La Physiologie du Vol d'après Léonard de Vinci,' in *Revue Scientifique*, mai 28, 1892, xlix. 687.

who wrote on the flight of birds in 1680, and the very valuable researches of Silberschlag, published in 1783,[41] were little known; nay, even the work of Cayley, which dates from 1796, had fallen into oblivion. Modern science had thus to begin anew, and it began by dismissing, first, certain prejudices which had taken hold of most minds.

One of these prejudices was to believe that the warm gases contained in the cavities of the bird's body and its quills render it lighter than an equal volume of air. Everyone can, however, calculate how insignificant the effect of that warm air must be;[42] and everyone knows that a bird which has been wounded on the wing falls at once to the ground. This prejudice could easily be discarded; but another, as to the immense force which the bird is supposed to develop during its flight, is much more difficult to get rid of. No amount of evidence, borrowed from what everyone can verify by dissecting the muscles of a bird, or by observing the ease with which it flies, could overthrow that very common error, supported by the most fallacious calculations of a French mathematician made in the early part of this century.[43] It took Professor S. Langley in America nearly four years of careful experiments to show how erroneous were both those calculations and the data upon which they were based.[44] Now we can at last take it as granted that, although the energy spent by birds in sustaining themselves in the air varies a great deal according to their shapes and manners of flight, it is less than one $\frac{1}{100}$th to $\frac{2}{100}$ths of one horse-power for each 2 lb. of body weight. And, as art has already succeeded in producing small prime motors whose weight does not exceed 10 lb. per horse-power, one sees at once that the problem to be solved by the flying-machine offers no mechanical impossibility, provided we learn to utilise the energy of our motor as well as the birds utilise their forces.

The next step to be made is, accordingly, to learn from the birds how best to utilise the force of a motor, and therefore to study the mechanical details of birds' flight. Science has done this well, and we have already most excellent guides for this part of the problem in the works of the Duke of Argyll, Mr. Pettigrew, Mouillard, and the fundamental work of Marey (*Le Vol des Oiseaux*), in which last all such problems have been treated with the aid of instantaneous photo-

[41] *Schriften der Berliner Gesellschaft der Naturfreunde*, Bd. ii. 1781–1784.

[42] Its effect can counteract but $\frac{1}{5000}$th part of the weight of the bird (Marey, *Le Vol des Oiseaux*, p. 287).

[43] Navier (*Mémoires de l'Institut*, ii. 1829) maintained that in order to sustain itself in the air a swallow spends a force of one-seventeenth of a horse-power. Langley found that force fifty times smaller. Even the calculations of Babinet, a supporter of aviation, were quite erroneous, as shown by Marey (*Le Vol des Oiseaux*, p. 328).

[44] S. P. Langley, in *Smithsonian Contributions to Knowledge*, 1891, p. 801; and *American Journal of Science*, November 1891. Also Lord Rayleigh's discussion of the same in *Nature*, December 3, 1891 (xlv. 108), where indications to the works of Mr. Wenham and Mr. W. Froude will be found.

graphs, taken at intervals of small fractions of a second, not to speak of many others, each of which contains some valuable information.[45] It would be impossible to describe here in a few words, and without the aid of drawings, the admirable mechanism by which the bird drives the air with its wings (rigid at the front edge and flexible at the back), compresses it, and has only to progress forward in order to sustain itself in the air in spite of the action of gravitation. This must be read in the above-named works and seen on Marey's photographs. But what must be said is, that a continuous rotatory movement being more advantageous in a machine than a mechanism which would be an imitation of the flapping of the wings, the best form to be given to a screw-propeller which has to act in the air was indicated by such investigations. It was found already by Leonardo da Vinci, and worked out by Cayley in 1796. It has been lately studied experimentally by several physicists, meteorologists, and inventors—all experiments proving the considerable lifting powers of a screw-propeller in the air. And we have now a direct proof of these powers in Maxim's machine. His propeller, which rotates in a medium having such a small density as air has, communicates nevertheless to the heavy machine, with its motor, aeroplane, and a dozen passengers, a horizontal speed of nearly forty miles in the hour. Half the problem is thus solved, because, as shall presently be shown, a great horizontal speed is the first condition of aviation.

We all know, indeed, that most birds, before they can rise in the air, must acquire a certain horizontal speed. Many good flyers can be kept prisoners in an open small yard surrounded by walls twenty feet high, or even on a small open pond surrounded by low but grassy shores, upon which the bird cannot take the necessary run.[46] But once a bird has acquired this speed—and it mostly acquires it by running against the wind—it flies with a wonderful ease; its spread wings and its speed sustain it. Once in motion, the swallow and many other birds will fly any amount of time, hardly using at all their wings for flapping.

These observations, supported by a number of theoretical in-

[45] The chapter devoted by the Duke of Argyll, in his *Reign of Law* (first edition, 1866), to the flight of birds is a masterly work, based upon his and his father's observations, and imbued with a thorough knowledge of Nature. The same qualities will be found in the more exhaustive works of Mr. Pettigrew (*Animal Locomotion . . . with a Dissertation on Aeronautics*, London, 1873) and Mouillard (*L'Empire de l'Air: Essai d'Ornithologie appliquée à l'Aviation*, Paris, 1881); while the large work of Marey (*Physiologie de la Locomotion Le Vol des Oiseaux*, Paris, 1890, which must not be confounded with his earlier work) is an exhaustive treatise, based upon observations made with the aid of chronophotography. Some of the earlier works are already named. See also Lilienthal's *Der Vogelflug als Grundlage der Fliegekunst*, Berlin, 1889; T. d'Esterno, *Du Vol des Oiseaux*, Paris, 1864; Goupil, *La locomotion aérienne*, Charleville, 1884, &c., each of which contains valuable observations.

[46] Mouillard (*L'empire de l'air*) has made the experiment with *Procellaria*.

vestigations by Wenham, Froude, Langley, and others, into the resistance of the air, naturally suggested to inventors the idea of the 'aeroplane'—that is, of a thin rigid surface, inclined by very few degrees (not more than five) to the horizon, and moving horizontally, edge forward. The particles of air which strike the surface under a certain angle spend part of their energies in lifting it, and this lifting power, as foreseen by experimenters and lately supported theoretically by Lord Kelvin, is very much greater than was supposed.[47] A great number of experiments have already been made to measure the lifting powers of different surfaces placed under different angles of inclination and moving at different speeds, especially by Professor Langley; but if there remain some doubts as to the correctness of the result, Maxim's machine should dispel them. Those who have travelled on its platform unanimously maintain that it hardly touches the ground when it is launched at a speed of nearly forty miles, and that, were it not prevented from rising, it would do so, as soon as its speed, or the aggregate surface of its aeroplanes were slightly increased.

To be lifted in the air, and to move in it in a horizontal direction, is, however, one part only of the problem. The other is to maintain equilibrium, which is continually modified by the continually changing pressure of air upon the different parts of the aeroplane or the superposed smaller aeroplanes. The bird feels the changes of pressure on its wings, and gently alters their position, in the same way as the bicyclist feels the slight alterations of equilibrium and changes accordingly the relative positions of his two wheels. But a flying-machine must accomplish this automatically; and before this is achieved, some better acquaintance with the minute details of the art of flying will necessarily be required. This is what gives an especial interest to the flights which Otto Lilienthal has performed in Germany.[48] He adjusts to his body a pair of moderate-sized concave wings, and after having taken a run down a gently sloping hill, always against the wind, he is soon lifted in the air. Floating at a certain height over the ground, against the wind, he glides down a gently sloping line without ever attempting to flap with the wings, and he lands some 100 to 300 yards (occasionally, 500 yards) from the spot where he left the ground. Of course, this is not flight properly speaking, but, as foreseen by Lord Rayleigh in 1883, it is through such experiments that we may learn the technics of flying and steering. Through them we learn also a good deal about the lifting force

[47] *Nature*, August 30, 1894. Of course, there is a certain relation between the area of the surface and the weight it has to support. In large birds, a surface of wings 10½ square feet easily supports a weight of 18 lb. A concave surface, as shown by Lilienthal, supports a greater weight than a plane surface of equal area.

[48] See his work on the subject, his later papers in the *Zeitschrift für Luftschiffahrt* Dr. A. Dubois Reymond's account to the Berlin Academy (December 15, 1893), and the accounts given in *Nature* (vol. l.) and the aeronautic papers.

of the wind. Thus, during one of his experiments, Lilienthal was caught by a gust of stronger wind, and instead of being thrown backwards by it, or being overturned (this last was prevented by a timely manœuvre of the feet), he was *lifted* to a higher level than the spot where he left the ground. He simply received an object-lesson in soaring.[49] It is known, indeed, that when a fresh breeze is blowing, many big birds, after having reached a level of from 200 to 300 feet by means of strokes of their wings, remain almost motionless in the strong breeze, and by simply changing the inclination of their wings and the direction of their gliding they gradually rise to the level of 2,000 and 3,000 feet, as they describe their great spirals. Rising in the air, without spending any muscular effort, certainly sounds like a paradox; but the best naturalists, including Audubon and Darwin, are unanimous in testifying that in such flight the birds do not flap their wings; they even do not move the feathers of their wings; and it now appears certain, after a long discussion has run through the papers on the subject and exhaustive experiments have been made, that no such movement is needed in reality. The bird, gliding against the wind, is lifted by it and rises to a higher level, in the same way as Lilienthal was thrown upwards against his own will; and it takes advantage of the thus gained height for gliding down a slightly inclined line and for acquiring velocity, which permits it again, after it has turned against the wind, to win in height. But still these manœuvres did not well explain how the bird could gradually rise to a higher level, and some uncertainty continued to prevail about the matter.

The key to the puzzle (foreseen by Lord Raleigh as early as 1883,[50] and indicated by Mouillard) was finally given this year by Professor Langley, again on the basis of physical experiments, in which the American physicist is known to excel. The explanation is in the 'waves and gushes' of which every wind consists. Wind, we now learn, is not what it is usually considered to be. It is not 'a mass of air in motion,' but consists of small masses moving with such irregularities of speed as we never suspected before. By means of very light paper anemometers, the rotations of which were measured every second instead of every minute, Professor Langley ascertained that the velocity of wind is continually changing. It varies every second, and while the average velocity may be twenty-three miles, it will, in the course of one minute, be altered several times, from twenty-three miles to thirty-three miles, back to twenty-three, then

[49] The diagram of this case is given in the *Zeitschrift für Luftschiffahrt*, 1893, ii. 259.

[50] He remarked in *Nature* (xxvii. 535), at the end of a long discussion which had run through the paper, that *wind is not uniform*, and he inquired 'whether anything can be made of the difference of horizontal velocities which we know to exist at different levels.' Leonardo da Vinci was also very near to this solution. He also explained the rising of the bird by the 'waves and gushes' in the air.

to thirty-six, then fall to zero, and so on. So that a heavy bird which glides with a certain velocity through the air can constantly utilise the gushes of the wind to be lifted, without ever using its wings for flapping. It has, as Professor Langley shows by direct experiments upon floating surfaces, merely to change the inclination of its wings in order to win in height, and then to spend part of the potential energy in acquiring velocity,[51] all this with the judgment which it derives from its experience of the medium it lives in. The differential energy of the gushes supplies the necessary energy for lifting the bird. These considerations explain why birds succeed with so little or no effort in rising to great heights, or in covering immense distances. They do what the boatman does when he takes advantage of a gust of wind to progress under sail. They may be said to take tacks, but in a vertical direction.

The above sketch can only convey a very faint idea of the rich body of data upon which scientific investigation bases its conclusions as to the full possibility of aerial navigation by means of a machine which is heavier than air. All the elements of the problem are being settled one after the other by experiments and calculations, and the points in which the aid of the mathematician is especially required are indicated. The data are there, and what is wanted is the creative inspiration to utilise these data. And in this direction, the machine of Mr. Maxim, the very successful models of Mr. Hargrave, worked by small steam-engines,[52] and the flying experiments of Lilienthal, are important steps already made. The solution thus seems to lie now within a measurable distance from our own times—unless a wind of reaction, such as has already blown twice in the past, comes to throw again into oblivion all that has been done up to this date.

P. KROPOTKIN.

[51] S. P. Langley, 'The Inner Work of Wind,' in *American Journal of Science*, 1894, 3rd series, xlvii. 41.

[52] *Journal and Proceedings of the Royal Society of New South Wales*, 1892, xxvi. 170, and 1893, xxvii. 75

TO A BABY KINSWOMAN

Love, whose light thrills heaven and earth,
Smiles and weeps upon thy birth,
Child, whose mother's love-lit eyes
Watch thee but from Paradise.
Sweetest sight that earth can give,
Sweetest light of eyes that live,
Ours must needs, for hope withdrawn,
Hail with tears thy soft spring dawn.
Light of hope whose star hath set,
Light of love whose sun lives yet,
Holier, happier, heavenlier love
Breathes about thee, burns above,
Surely, sweet, than ours can be,
Shed from eyes we may not see,
Though thine own may see them shine
Night and day, perchance, on thine.
Sun and moon that lighten earth
Seem not fit to bless thy birth:
Scarce the very stars we know
Here seem bright enough to show
Whence in unimagined skies
Glows the vigil of such eyes.
Theirs whose heart is as a sea
Swoln with sorrowing love of thee
Fain would share with thine the sight
Seen alone of babes aright,
Watched of eyes more sweet than flowers
Sleeping or awake: but ours

Can but deem or dream or guess
Thee not wholly motherless.
Might they see or might they know
What nor faith nor hope may show,
We whose hearts yearn toward thee now
Then were blest and wise as thou.
Had we half thy knowledge,—had
Love such wisdom,—grief were glad,
Surely, lit by grace of thee;
Life were sweet as death may be.
Now the law that lies on men
Bids us mourn our dead: but then
Heaven and life and earth and death,
Quickened as by God's own breath,
All were turned from sorrow and strife:
Earth and death were heaven and life.
All too far are then and now
Sundered: none may be as thou.
Yet this grace is ours—a sign
Of that goodlier grace of thine,
Sweet, and thine alone—to see
Heaven, and heaven's own love, in thee.
Bless them, then, whose eyes caress
Thee, as only thou canst bless.
Comfort, faith, assurance, love,
Shine around us, brood above,
Fear grows hope, and hope grows wise,
Thrilled and lit by children's eyes.
Yet in ours the tears unshed,
Child, for hope that death leaves dead,
Needs must burn and tremble; thou
Knowest not, seest not, why nor how,
More than we know whence or why
Comes on babes that laugh and lie
Half asleep, in sweet-lipped scorn,
Light of smiles outlightening morn,

Whence enkindled as is earth
By the dawn's less radiant birth
All the body soft and sweet
Smiles on us from face to feet
When the rose-red hands would fain
Reach the rose-red feet in vain.
Eyes and hands that worship thee
Watch and tend, adore and see
All these heavenly sights, and give
Thanks to see and love and live.
Yet, of all that hold thee dear,
Sweet, the dearest smiles not here.
Thine alone is now the grace,
Haply, still to see her face;
Thine, thine only now the sight
Whence we dream thine own takes light.
Yet, though faith and hope live blind,
Yet they live in heart and mind
Strong and keen as truth may be:
Yet, though blind as grief were we
Inly for a weeping-while,
Sorrow's self before thy smile
Smiles and softens, knowing that yet,
Far from us though heaven be set,
Love, bowed down for thee to bless,
Dares not call thee motherless.

ALGERNON CHARLES SWINBURNE.

May 1894.

The Editor of THE NINETEENTH CENTURY *cannot undertake to return unaccepted MSS.*

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POLITICAL MAP
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BY J. G. BARTHOLOMEW
Showing Delimitation
According to Latest Treaties
July 1894
English Miles
REFERENCE TO COLOURING
BRITISH
PORTUGUESE
GERMAN
TURKISH
FRENCH
ITALIAN
AFRICAN STATES
ATLANTIC OCEAN
GULF OF GUINEA
Tropic of Cancer
Tropic of Capricorn
Equator
SPAIN
ITALY
ALGERIA
MOROCCO
TRIPOLI
FEZZAN
SAHARA
FRENCH SPHERE
SOUDAN
FRENCH CONGO
ANGOLA
GERMAN
SOUTH-WEST
AFRICA
CAPE TOWN
Cape of Good Hope
St Helena
Ascension
Madeira Is
Canary Is
Azores
Timbuctoo
Tripoli
Algiers
Tunis
Madrid
Barcelona
Lisbon
Oporto
Valencia
Sardinia
Sicily
Malta
Fez
Mogador
Tangier
Algerian Sahara
Igdi Desert
Taganet
Afeleie
Tibesti
Bilma
Agades
Kano
Sokoto
Bornu
Lake Chad
Timbuctoo
Jenne
Mossi
Ashanti
Dahomey
Benin
Niger
Gold Coast
Grain Coast
Liberia
Sierra Leone
Gambia
Senegal
Mandingoes
Monrovia
C. Palmas
Accra
Lagos
Cameroons
Fernando Po
Gaboon R.
Princes I.
St Thomas
Congo
Loanda
Benguela
Mossamedes
Walfish Bay
Damara
Namaqua
Orange R.
Cape Frio
Cape Negro
Walvish B.
Ambriz
Ambrizette
Kinsembo
Kakongo
Loango
Chinchoxo
Landana
Cabinda
Banana
Boma
Matadi
Stanley Pool
Leopoldville
Brazzaville
Bangala
Yakoma
Wadai
Kanem
Darfur
Kordofan
Abyssinia
Massowah
Suakim
Berber
Dongola
Nubia
Egypt
Cairo
Alexandria
Suez
Red Sea
Gulf of Sidra
Gulf of Cabes
Gulf of Guinea
Bight of Biafra
Bight of Benin
Lake Tchad
Lake Ngami
Lake Nyassa
Lake Tanganyika
Victoria Nyanza
Albert Nyanza
Albert Edward Nyanza
Zambesi R.
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Nile R.
Orange R.
Limpopo R.
Zambesi R.
Tropic of Cancer
Tropic of Capricorn
Equator

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